

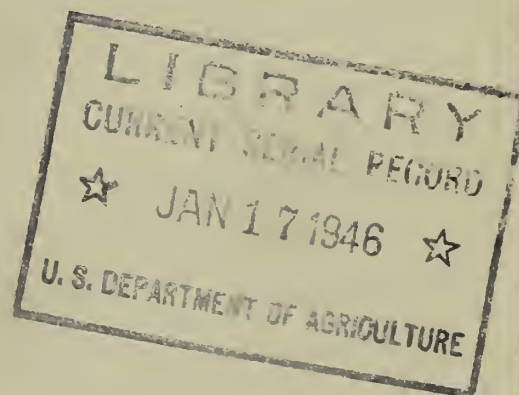
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FARM CREDIT ADMINISTRATION
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

COOPERATIVE
FROZEN FOOD LOCKER ASSOCIATIONS
IN ILLINOIS
1945



By
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COOPERATIVE RESEARCH AND SERVICE DIVISION

In Cooperation With the
St. Louis Bank for Cooperatives
St. Louis, Missouri

UNITED STATES DEPARTMENT OF AGRICULTURE
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COOPERATIVE FROZEN FOOD LOCKER ASSOCIATIONS IN ILLINOIS, 1945

By

Paul C. Wilkins
Associate Agricultural Economist

Both patrons and others continue to show active interest in the development of cooperative frozen-food locker plants. Total assets of 25 cooperative locker associations in Illinois in 1945 amounted to more than a million dollars. Their combined annual volume of business was over \$540,000 and the 60 branch and complete plants operated by them stored approximately 4,474 tons of meat and poultry during the year.

This report is based on analysis of the business of these 25 associations, operating in 25 counties throughout the State, made at the request of the Illinois Cooperative Locker Service. The survey covers the operations of each association for their respective fiscal years, ending between August 31, 1944, and July 31, 1945.

Nine county associations had but one plant each; eight associations operated branch locker rooms; and the remaining associations each had from two to six complete processing and locker plants.

The 48 complete plants had average capacity for 510 lockers each and the 12 branch plants, for 203 lockers each. At the close of their fiscal years, the 60 complete and branch locker plants had in operation a total of 26,975 lockers. Thirteen associations provided curing service and 11 associations rendered lard. Five associations slaughtered for patrons, either on the farm or at the plant.

Several associations not equipped for slaughtering, curing, smoking, or lard rendering entered into agreements with local businesses equipped to furnish these services so that the locker patrons could have all the major processing services available.

PURPOSE OF ANALYSIS

The purpose of this analysis of investment, income, and expense is to provide the boards of directors, plant managers, and operators with information on the operations of the associations and data of a comparable nature on the relative efficiency and success of the associations and the individual plants.

Analysis of the balance sheets shows the relative financial position of each association, particularly the composition of the association's assets and the sources from which these funds were obtained. The analysis of investment in fixed assets compares facility costs of plants

NOTE - The author wishes to express appreciation to the officials of the cooperatives who supplied the data pertaining to their organization and to L. B. Mann, S. T. Warrington, and Etta C. Emmons for their suggestions and assistance in the preparation of this report.

built between 1937 and 1940 with plants built in the past 2 years. Plants of five recently organized associations are included in the analysis of investment but in no other part of this study.

The composite and average income-and-expense statement compares the present year's operations with those of the previous year, pointing out significant changes. The detailed analysis of income and expense covers the various sources of income and the major items of expense in an attempt to determine weaknesses in operations.

Labor costs for the year just completed are compared with labor costs for the previous year, as a check on relative efficiency of labor.

Depreciation, the next most significant expense, was not fully analyzed as the circumstances surrounding it were so variable that it seemed to require further and more specific study than could be given to it at this time.

Power and light cost is, on the average, the third largest expense item. This analysis points out the wide variations in power consumption and some of the factors which might account for the variations.

ASSETS AND SOURCES OF FUNDS

Table 1 portrays the assets, the sources of funds, and the methods of financing the individual associations. Total assets amount to over a million dollars of which \$810,683, or 74 percent, is represented by investments in fixed assets. Investments in United States Government bonds and securities, stock in the St. Louis Bank for Cooperatives, and stock in other cooperatives amount to \$37,855, or only 3 percent of total assets. Current assets account for 20 percent and other assets for 3 percent.

The funds for financing the locker associations are obtained primarily from the sale of capital stock. For the period studied, 49.6 percent of all funds were obtained from this source. Borrowed capital - the second largest source of funds - amounts to 16.6 percent of total funds. It is significant, however, that nine associations have no borrowed capital whatsoever. Four associations have borrowed capital amounting to over 30 percent of total funds, and one association is financed with borrowed funds to the extent of 55.6 percent of total assets. In associations 2 and 12, retained net savings exceeds total borrowed capital.

Prepaid locker rentals is one of the major sources of operating capital for the associations. Of the total funds 12.8 percent was represented by locker rentals deferred at the close of the fiscal years. Two associations had no deferred locker rentals while in one association this was the source of over 24 percent of its funds at the close of the year. The two associations with no deferred locker rentals probably follow the policy of having all rental due and payable the first day of the fiscal year. Then, at the close of the year, there would be no unearned rentals.

Table 1. - Comparison of assets of 25 Illinois cooperative locker associations showing percentage of funds secured from different sources, 1944-45

Association (Code No.) ^a	Assets				Total	Source of funds					
	Current assets	Investments	Fixed assets ^b	Other assets		Credit ^c extended	Advanced locker rentals	Percent			
								Borrowed capital	Capital stock	Retained net savings	
Dollars											
1.....	17,039	450	41,198	1,004	59,691	6.7	17.0	-	63.5	12.8	100.0
2.....	10,500	1,250	76,475	4,312	92,537	10.0	16.3	16.3	40.2	17.2	100.0
3.....	22,170	650	69,453	2,980	95,253	23.4	10.1	11.1	49.1	6.3	100.0
4.....	3,248	550	20,667	307	24,772	3.2	-	9.7	86.1	1.0	100.0
5.....	16,255	850	58,604	1,443	77,152	24.1	8.4	17.8	38.9	10.8	100.0
6.....	12,563	50	22,409	1,033	36,055	7.5	17.7	-	58.7	16.1	100.0
7.....	3,366	650	28,536	566	33,118	8.6	18.3	17.7	49.0	6.4	100.0
8.....	7,434	155	27,349	629	35,567	7.2	24.1	-	45.7	23.0	100.0
9.....	3,676	550	16,816	557	21,599	6.7	11.0	21.9	61.1	(0.7)	100.0
10.....	5,558	150	38,727	415	44,850	5.8	16.2	37.9	24.3	15.8	100.0
11.....	3,091	424	35,171	1,712	40,398	8.9	10.2	17.4	51.4	12.1	100.0
12.....	5,264	450	27,953	1,650	35,317	3.6	19.3	3.3	68.7	5.1	100.0
13.....	3,383	550	18,592	450	22,975	6.3	19.7	31.2	35.9	6.9	100.0
14.....	39,269	17,752	78,603	2,727	138,351	5.9	12.5	26.1	53.9	1.6	100.0
15.....	7,261	10,524	9,901	276	27,962	16.8	8.7	-	31.2	43.3	100.0
16.....	4,226	50	6,720	1,009	12,005	9.0	17.1	-	64.8	9.1	100.0
17.....	949	-	6,792	366	8,107	11.6	10.0	-	65.7	12.7	100.0
18.....	14,380	50	16,204	1,320	31,954	16.6	-	-	58.0	25.4	100.0
19.....	2,223	750	46,349	1,302	50,624	2.6	12.9	25.7	50.9	7.9	100.0
20.....	2,321	-	10,961	-	13,282	2.2	20.4	39.9	28.7	8.8	100.0
21.....	1,442	1,000	10,932	649	14,023	2.5	11.6	-	70.2	15.7	100.0
22.....	15,005	50	22,391	222	37,668	29.9	13.1	-	50.6	6.4	100.0
23.....	12,525	-	27,330	976	40,831	15.0	10.8	55.6	15.3	3.3	100.0
24.....	981	-	25,900	513	27,394	4.4	5.8	32.9	59.0	(2.1)	100.0
25.....	10,728	950	66,650	2,077	80,405	3.2	11.7	14.5	57.7	12.9	100.0
Total.....	224,857	37,855	810,683	28,495	1,101,890	-	-	-	-	-	-
Average.....	8,994	1,514	32,428	1,140	44,076	10.6	12.8	16.6	49.6	10.4	100.0

^aArabic numerals represent a county association and its plants.

^bDepreciated value.

^cExtended credit includes all current liabilities and key deposits and constitutes a source of funds or capital for the associations.

Source of data: Audit reports of the associations for their full fiscal years ending between August 31, 1944, and July 31, 1945.

Funds secured from credit extended averaged 10.6 percent of total funds for the 25 associations. (See table 1, footnote 3.) Several associations planning expansions or new plants received funds in advance of the issuance of additional capital stock. These funds are included under credit extended until the stock is actually issued. (See figure 1.)

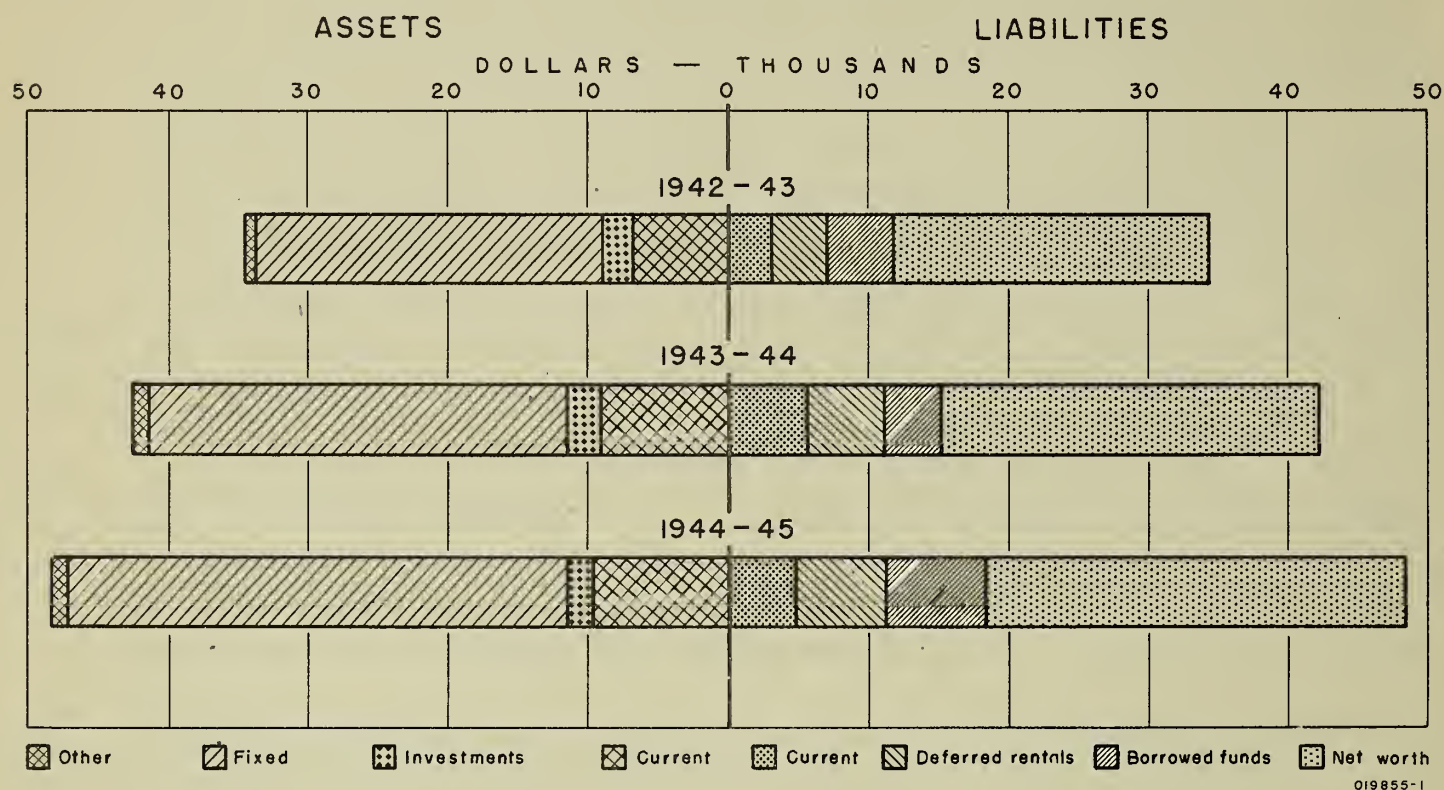


Figure 1. - Average financial condition of 20 Illinois Cooperative Locker Associations operating 3 or more years, 1942-43 to 1944-45.

Retained net savings comprised 10.4 percent of total funds and averaged \$4,598 per association. (See also table 2.) In association 15, member-patrons' equity amounted to 43.3 percent of total funds and in two other associations retained net savings exceeded 20 percent. Associations 9 and 24 reported a small deficit, thus impairing to some extent their capital stock.

AVERAGE FINANCIAL RATIOS

Comparison of average financial ratios between 20 associations surveyed by the St. Louis Bank for Cooperatives in 1943 and the 25 associations included in this study shows the following:

Ratio:	1943	1945
1. Current assets to current liabilities.....	1 to 0.61	1 to 0.52
2. Current assets and deferred charges to current liabilities and unearned locker rentals.....	1 to 1.07	1 to 1.02
3. Fixed assets (cost) to capital stock.....	1 to 0.63	1 to 0.54
4. Fixed assets (book value) to term indebtedness.....	1 to 0.18	1 to 0.23
5. Fixed assets (book value) to capital stock and retained net savings.....	1 to 0.92	1 to 0.82
6. Capital stock to retained net savings.....	1 to 0.18	1 to 0.21

Table 2. - Net worth of 25 Illinois cooperative locker associations, as represented by capital stock and retained net savings and its relation to total assets, 1944-45

Association	Retained net savings		Capital stock		Net worth		Total assets
	Total	Percentage of net worth	Total	Percentage of net worth	Total	Percentage of total assets	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars
1.....	7,628	16.7	37,925	83.3	45,553	76.3	59,691
2.....	15,927	30.0	37,150	70.0	53,077	57.4	92,537
3.....	6,030	11.4	46,750	88.6	52,780	55.4	95,253
4.....	260	1.2	21,325	98.8	21,585	87.1	24,772
5.....	8,384	21.8	30,000	78.2	38,384	49.8	77,152
6.....	5,803	21.5	21,175	78.5	26,978	74.8	36,055
7.....	2,107	11.5	16,225	88.5	18,332	55.4	33,118
8.....	8,194	33.5	16,250	66.5	24,444	68.7	35,567
9.....	(156)	(1.2)	13,200	101.2	13,044	60.4	21,599
10.....	7,091	39.5	10,875	60.5	17,966	40.1	44,850
11.....	4,873	19.0	20,775	81.0	25,648	63.5	40,398
12.....	1,794	6.9	24,250	93.1	26,044	73.7	35,317
13.....	1,588	16.1	8,250	83.9	9,838	42.8	22,975
14.....	2,185	2.8	74,600	97.2	76,785	55.5	138,351
15.....	12,108	58.1	8,725	41.9	20,833	74.5	27,962
16.....	1,091	12.3	7,775	87.7	8,866	73.9	12,005
17.....	1,026	16.2	5,325	83.8	6,351	78.3	8,107
18.....	8,114	30.5	18,525	69.5	26,639	83.4	31,954
19.....	3,978	13.4	25,775	86.6	29,753	58.8	50,624
20.....	1,169	23.5	3,806	76.5	4,975	37.5	13,282
21.....	2,206	18.3	9,850	81.7	12,056	86.0	14,023
22.....	2,393	11.1	19,075	88.9	21,468	57.0	37,668
23.....	1,353	17.8	6,230	82.2	7,583	18.6	40,831
24.....	(563)	(3.6)	16,175	103.6	15,612	57.0	27,394
25.....	10,367	18.3	46,375	81.7	56,742	70.6	80,405
Average.....	4,598	17.4	21,855	82.6	26,453	60.0	44,076

Source of Data: Audit reports of the associations.

The 20 associations included in the 1943 survey are included in this survey. Thus, the data presented above are a fair measure of the change in the financial condition of the associations during the past 2 years.

INVESTMENT IN PLANT FACILITIES

The purpose of this analysis is to determine to what extent the cost of plant facilities have increased in recent years. Table 3 portrays the cost of 17 plants built between 1937 and 1941. Table 4 portrays plant costs of 10 plants built since July 1943. The investment figures represent the original purchase price with no allowance for depreciation. As indicated in the tables, those plants whose buildings were constructed specifically to house locker plants are grouped separately from those installed in remodeled buildings.

In comparing the various investment items, it should be recognized that: (1) the investment in lockers covers only the lockers installed; (2) investment in processing equipment depends on the number of services offered rather than on size of plant; and (3) some arbitrary allocation of costs was necessary in those plants where the building, insulation, and refrigeration were purchased under one contract.

As shown in the tables, all major cost items with the exception of land increased during the 9-year period. The greatest increase was in construction costs. The cost of new buildings increased from an average of \$13.49 per locker of capacity¹ in 1937 through 1940 to \$20.95 for the plants built since July 1943. Remodeled buildings increased from \$10.75 per locker of capacity to \$16.04. Eliminating plants 5-C and 19-C the cost of remodeled buildings is \$20.74, or approximately the same as the cost of new buildings.

Analysis of building costs in each period reveals wide variation in this investment item. In some of these plants this variation may be attributed to differences in the amount of floor space available for processing services. In most cases, however, it is the result of actual differences in construction costs. In general, it seems that cooperatives should avoid excessive outlays for elaborate buildings as there is little to be gained from such expenditures in farming communities.

Insulation and refrigeration increased rather markedly during the 9-year period. Some of this increase is due no doubt to the additional investment in curing rooms. Most of the earlier plants had no such facilities, but the tendency in recent years is toward more complete plants that include curing rooms.

Investment in lockers installed increased approximately \$2 per locker during the period studied. Increased use of a greater percentage of the more expensive drawer-type lockers accounts for part of this increase. There was, however, a general increase in the cost of lockers.

¹The term "per locker of capacity" defines the data in terms of locker units, based on the total number of lockers that can be installed in the existing low temperature rooms, whether or not the lockers are actually installed.

Table 3. - Investment per locker of capacity, by principal items, in 17 Illinois cooperative locker plants built between 1937 and 1941

Plant No. ^a	Capacity	Amount of investment in							Total
		Land	Building	Insulation	Refrigeration	Lockers ^b	Processing equipment	Office equipment	
	Lockers	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
New buildings:									
8-A....	965	1.49	14.12	4.96	7.57	5.86	1.31	0.23	33.66
3-A....	852	4.24	23.18	5.44	6.32	4.73	2.45	0.36	45.32
7-A....	676	3.82	11.56	5.10	6.69	4.90	2.08	-	32.56
4-B....	525	1.33	18.72	5.77	6.26	4.76	3.38	-	40.22
1-C....	500	2.92	8.04	6.00	5.91	5.00	3.18	0.15	29.30
1-A....	500	2.37	10.01	6.00	5.91	5.00	1.38	0.16	29.48
5-A....	370	0.63	9.40	5.97	7.46	5.34	2.33	0.12	30.54
1-B....	350	0.93	8.26	7.47	7.37	5.00	1.81	0.06	29.25
1-D....	350	1.12	8.14	7.47	7.37	5.00	2.18	0.08	29.50
25-B....	325	1.61	10.67	7.41	6.98	5.69	2.48	0.16	35.01
25-A....	325	0.25	16.09	10.61	8.02	5.30	2.79	0.02	39.59
2-C....	315	1.00	11.68	7.47	7.11	5.20	0.66	-	31.97
Average....	-	2.12	13.49	6.04	6.85	5.16	2.15	0.25	34.66
Remodeled buildings:									
5-B....	600	2.50	6.26	8.58	6.89	5.00	1.03	-	27.97
2-E....	354	-	9.78	7.47	6.33	4.98	1.82	-	29.71
4-A....	320	1.17	14.62	5.80	7.98	4.88	2.70	-	37.15
6-B....	320	0.62	8.72	8.29	8.77	4.26	6.43	-	37.10
2-F....	300	-	18.92	5.50	4.74	4.98	0.78	-	33.32
Average....	-	1.67	10.75	7.37	6.95	4.81	2.33	-	32.24

^aArabic numerals represent a county association and its plants. Lettered subdivisions are for individual plants.

^bInvestment per locker installed.

Source of data: Warrington, S. T., Operation of Cooperative Frozen Food Locker Plants in Illinois, Farm Credit Administration Special Report 77, 38 pp. January 1941.

Table 4. - Investment per locker of capacity, by principal items, in 10 Illinois cooperative locker plants built since July 1943

Plant ^a	Capacity	Amount of investment in							Total
		Land	Building	Insulation	Refrigeration	Lockers ^b	Processing equipment	Office equipment	
	Lockers	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
New buildings:									
26-A.....	1,000	2.00	26.45	8.43	8.47	6.96	3.95	0.60	56.16
28-A.....	736	0.36	19.00	8.76	7.26	6.58	2.89	0.85	45.70
14-B.....	670	1.50	14.90	9.54	10.57	8.33	4.42	0.05	46.93
Average....	-	1.36	20.95	8.84	8.68	7.14	3.76	0.52	50.39
Remodeled buildings:									
27-A.....	714	2.80	23.81	9.06	7.65	6.46	2.21	0.70	52.69
3-C.....	600	.17	22.91	10.67	6.63	6.68	3.98	0.53	49.94
5-C.....	498	1.00	3.51	13.19	9.97	8.17	3.54	0.24	39.63
19-B.....	406	1.23	14.20	12.85	14.74	6.92	2.35	0.31	52.60
29-A.....	400	1.25	19.24	13.50	6.36	7.01	3.21	0.78	49.59
19-C.....	392	.26	2.42	10.75	6.35	7.53	-	-	27.31
30-A.....	342	2.46	20.05	14.63	10.81	6.15	4.41	0.92	59.43
Average....	-	1.35	16.04	11.72	8.69	6.98	2.83	0.50	47.60

^aSee footnote a, table 3.

^bInvestment per locker installed.

Source of data: Field survey

The cost of processing equipment increased substantially, indicating that the plants are now installing more equipment and offering a more complete line of processing services.

Total investment in locker plants increased from an average of \$34.08 to \$48.76 per locker installed. This represents an increase of 43 per cent in the total purchase price of plants.

Plant 12-D, not shown in the tables, was installed in a leased building at a cost of \$30.96 per locker of capacity. Investment costs per locker by major items were as follows: Remodeling building, \$5.38; insulation, \$9.15; refrigeration, \$9.36; lockers, \$6.46; and processing equipment, \$2.05. The plant has a total capacity of 520 lockers with 402 lockers installed.

It should be borne in mind that a continual increase in investment costs without a compensating increase in efficiency and use of the facilities must result in increased unit costs of services to the member-patrons. At their present rate structures and degrees of efficiency, some associations are now operating almost at cost. These associations planning expansions or new plants must either hold their investments at a low level or raise their locker rental and processing rates if they are to continue operating without a loss.

COMPOSITE AND AVERAGE FINANCIAL STATEMENTS

BALANCE SHEET

The composite and average balance sheet (table 5) shows total assets of \$1,101,889.26, or \$44,075.57 per association. Of this total \$32,427.28 is represented by fixed assets after depreciation and \$1,514.22 by investments. Current assets averaged \$8,994.34 per association and deferred charges, \$1,139.73.

Total liabilities excluding unearned locker rentals averaged \$23,729.11 per association, with noncurrent liabilities accounting for \$17,622.15 of this sum. Unearned locker rentals averaged \$5,642 per association.

Total net worth averaged \$26,453.42 per association, with \$21,855.45 representing capital stock issued and outstanding and \$4,597.97 representing retained net savings. Compared with the previous year, retained net savings increased by an average of only \$18.21 per association. Had no associations declared patronage dividends, however, average retained net savings would have increased by approximately \$1,950 per association.

INCOME AND EXPENSE STATEMENT

The data presented in table 6 were assembled from the audit reports of the associations and cover the past 2 fiscal years of operation. Twenty-five associations are included in the 1944-45 analysis, while only 20 associations are included in the 1943-44 analysis. For this

Table 5. - Composite and average balance sheet for 25 Illinois cooperative locker associations, 1944-45

Assets	Total Dollars	Average Dollars	Per- cent	Liabilities	Total Dollars	Average Dollars	Per- cent
Current assets:				Current liabilities:			
Cash on hand and in bank.....	155,351.12	6,214.05	14.10	Accounts payable.....	23,771.14	950.85	2.16
Accounts receivable - trade.....	43,478.87	1,739.15	3.94	Notes payable.....	46,190.74	1,847.63	4.19
Accounts receivable - other.....	4,483.26	179.33	.41	Taxes payable (soc. sec., State			
Reserve for doubtful accounts.....	(3,279.08)	(131.16)	(.30)	and local).....	6,496.84	259.87	.59
Merchandise inventory.....	12,536.00	501.20	1.14	Federal income tax payable.....	14,286.29	571.45	1.30
Advance funds-capital stock and				Accrued expenses payable.....	4,488.12	179.52	.41
locker rentals.....	12,199.00	487.96	1.11	Dividends payable-preferred stock...	15,667.63	626.71	1.42
Accrued interest.....	95.53	3.81	.01	Patronage refund payable.....	10,873.09	434.92	.99
Total current assets.....	224,858.50	8,994.34	20.41	Advance funds-capital stock and			
				locker rentals.....	30,117.00	1,204.68	2.73
Deferred charges:				Reserves for expenses payable.....	783.22	31.33	.07
Prepaid plant supplies and expenses	15,743.06	629.72	1.43	Total current liabilities.....	152,674.07	6,106.96	13.86
Prepaid insurance and bonding.....	11,093.30	443.73	1.01				
Other deferred charges.....	1,656.90	66.23	.15	Deferred income:			
Total deferred charges.....	28,493.26	1,139.73	2.59	Unearned locker rentals.....	141,050.04	5,642.00	12.80
Investments:				Noncurrent liabilities:			
Stock-other cooperatives and				Notes payable.....	136,395.37	5,455.82	12.38
St. Louis Bank for Cooperatives...	9,506.51	380.26	.86	Key deposit.....	10,434.27	417.37	.94
U. S. Government Securities.....	12,548.00	501.92	1.14	Total noncurrent liabilities.....	146,829.64	5,873.19	13.32
Notes Receivable - Farm Bureau....	15,800.98	632.04	1.43	Total liabilities.....	440,553.75	17,622.15	39.98
Total investments.....	37,855.49	1,514.22	3.43				
Fixed assets:				Net worth			
Leasehold improvements.....	6,079.07	243.16	.55	Capital stock:			
Land, plant, and equipment.....	1,012,328.35	40,493.14	91.87	Issued and outstanding.....	546,386.25	21,855.45	49.59
Total.....	1,018,407.42	40,736.30	92.42	Retained net savings.....	114,949.26	4,597.97	10.43
Less: Reserve for depreciation..	207,725.41	8,309.02	18.85	Total net worth.....	661,335.51	26,453.42	60.02
Net book value.....	810,682.01	32,427.28	73.57	Total liabilities and net worth...	1,101,889.26	44,075.57	100.00
Total assets.....	1,101,889.26	44,075.57	100.00				

Source of data: Based upon audit reports.

Table 6. - Composite and average income and expense statement (comparative),^a Illinois cooperative locker associations, 1944-45

Item	Fiscal years ending between August 31, 1944 and July 31, 1945			Fiscal years ending between August 31, 1943 and July 31, 1944			Average increase or decrease Dollars
	Total	Average	Percent- age of operating income	Total	Average	Percent- age of operating income	
Income:							
Earned locker rentals.....	277,516.38	11,100.65	51.04	218,811.82	10,940.59	51.98	160.06
Meat processing.....	226,354.28	9,054.17	41.63	178,315.51	8,915.78	42.36	138.39
Fruit and vegetable processing.....	10,127.31	405.09	1.86	5,695.65	284.78	1.35	120.31
Merchandise sales.....	7,511.74	300.47	1.38	3,986.50	199.32	.95	101.15
Inedible sales.....	19,499.41	779.98	3.59	13,345.05	667.25	3.17	112.73
Other plant income.....	2,746.27	109.85	.50	803.59	40.18	.19	69.67
Total operating income.....	543,755.39	21,750.21	100.00	420,958.12	21,047.90	100.00	702.31
Expenses:							
Salaries and wages.....	240,677.11	9,627.08	44.26	174,009.22	8,700.46	41.34	926.62
Power and lights.....	48,608.59	1,944.34	8.94	36,010.14	1,800.51	8.56	143.83
Heat and water.....	8,475.49	339.02	1.56	7,665.45	383.27	1.82	-44.25
Laundry.....	3,972.04	158.88	.73	3,781.96	189.10	.90	-30.22
Plant supplies.....	32,068.36	1,282.74	5.90	24,729.65	1,236.48	5.87	46.26
Plant repairs.....	14,032.14	561.29	2.58	10,194.59	509.73	2.42	51.56
Licenses and taxes.....	15,751.46	630.06	2.90	8,504.80	425.24	2.02	204.82
Bonding and insurance.....	8,986.63	359.47	1.65	5,863.69	293.18	1.39	66.29
Educational and promotional.....	6,085.51	243.42	1.12	5,343.36	267.17	1.27	-23.75
Directors per diem, legal and audit.....	11,320.74	452.83	2.08	8,149.25	407.46	1.94	45.37
Office supplies and expenses.....	13,602.87	544.11	2.50	8,964.94	448.25	2.13	95.86
Bad debts and losses.....	1,048.02	41.92	.19	1,946.10	97.30	.46	-55.38
Truck, auto and mileage.....	7,306.22	292.25	1.35	3,320.47	166.02	.79	126.23
Depreciation and rent.....	65,145.62	2,605.82	11.98	50,472.10	2,523.61	11.99	82.21
Other expense.....	2,777.06	111.08	.51	2,452.24	122.61	.58	-11.53
Total expense.....	479,857.86	19,194.31	88.25	351,407.96	17,570.39	83.48	1,623.92
Net operating income.....	63,897.53	2,555.90	11.75	69,550.16	3,477.51	16.52	-921.61
Other income:							
Non-operating and miscellaneous.....	4,331.74	173.27	.80	7,688.88	384.44	1.83	-211.17
Total.....	68,229.27	2,729.17	12.55	77,239.04	3,861.95	18.35	-1,132.78
Other expenses:							
Interest.....	4,388.14	175.53	.81	3,073.99	153.70	.73	21.83
Federal income tax.....	14,871.34	594.85	2.73	17,120.37	856.02	4.07	-261.17
Total other expenses.....	19,259.48	770.38	3.54	20,194.36	1,009.72	4.80	-239.34
Net savings.....	48,969.79	1,958.79	9.01	57,044.68	2,852.23	13.55	-893.44

^a25 associations included in the 1944-45 analysis and 20 associations included in the 1943-44 analysis.

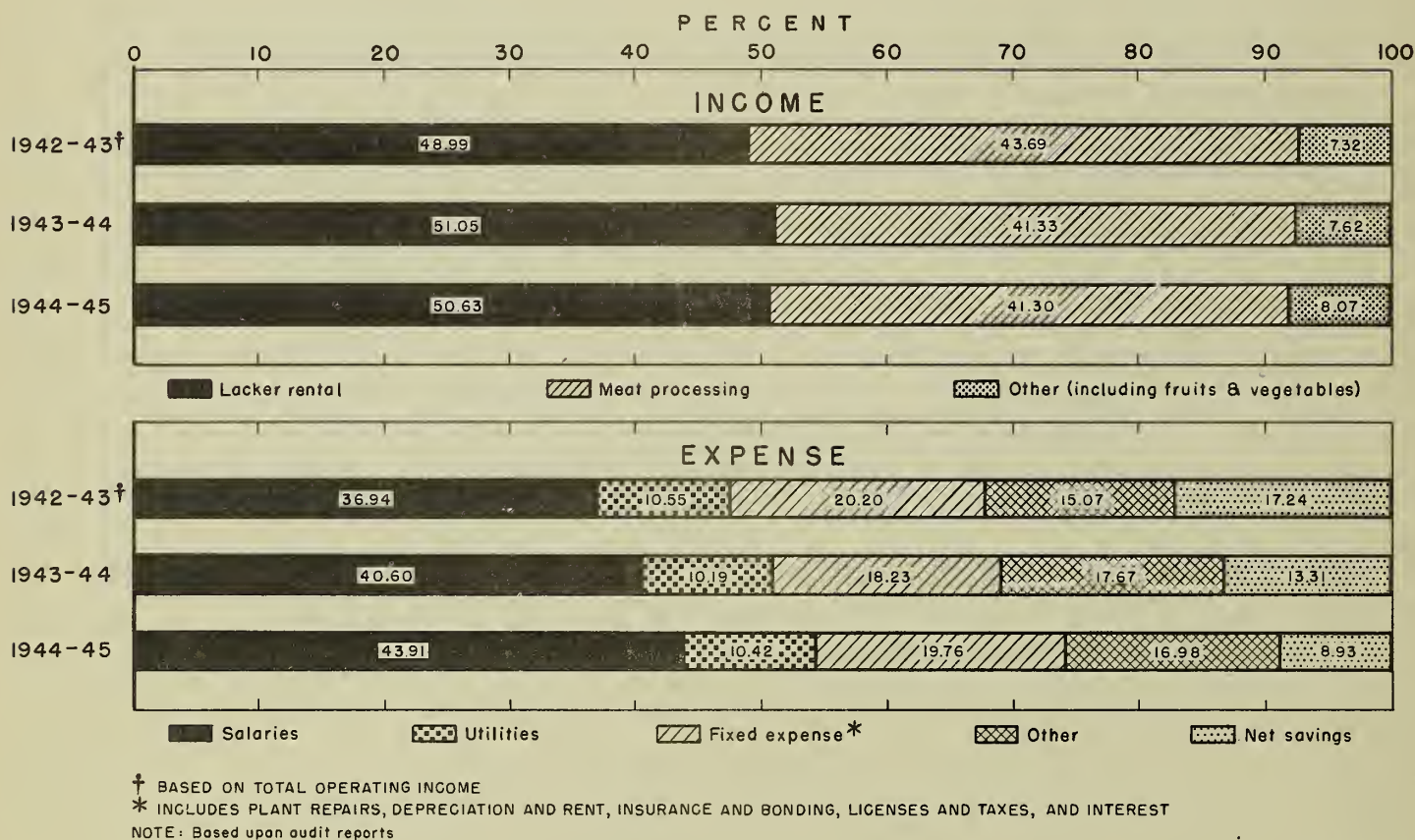
^bNet savings of 9.01 percent differs from the net savings of 8.93 percent shown in table 9 because in this table net savings is computed as a percentage of total operating income while in table 9 net savings is shown as a percentage of total gross income.

Source of data: Based upon audit reports.

reason, only the data on average income and expense and the data presented in the column showing average increase and decrease in income and expense can be considered of value in making comparisons.

The significant fact revealed by this comparison is the increased income from all services. Locker rentals continue to increase relative to other income, with \$160 of the \$702 average increase derived from the rental of lockers. To a large extent this may be attributed to the fact that the lockers were rented steadily throughout the year and very few lockers were reserved to take care of the seasonal overflow of patrons' regular lockers. Instead, many plant managers installed temporary lockers of cardboard or wood construction on top of the regular lockers to be rented on a monthly basis as overflow lockers.

Meat processing increased \$138 per association but declined as a percentage of total income. Fruit and vegetable processing increased from \$285 to \$405 per association and merchandise sales increased from \$199 to \$300 per association. (See figure 2.)



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Figure 2. - Illinois cooperative locker associations, average income and expense, 1942-43 to 1944-45.

The increased income from inedible sales was greater than might be expected in view of the relatively small increase in volume of meat handled. This would indicate either that a higher price was being received for the inedible products or that the associations were salvaging more offal than previously. As more associations undertake to slaughter for their patrons, greater income should be realized from sales of inedible products.

The composite analysis of expense demonstrates the rapid increase in the cost of labor and management. Salaries and wages increased over \$926 per association, or from 41.34 percent to 44.26 percent of total operating income. The increase in this single expense item was more than the increase from all income sources. For the fiscal year 1942-43, salaries and wages amounted to 36.94 percent of total operating income and in 1941-42, only 35.64 percent. The increase in salaries and wages combined with the increase in the cost of licenses and taxes, utilities, transportation, depreciation, and supplies resulted in an over-all decline in net operating income from \$3,477.51 per association to \$2,555.90 per association.

Interest expense increased \$21.83 per association and Federal income tax declined \$261.17 per association. Net savings for the year declined from 13.55 percent to 9.01 percent of operating income, or \$893.44 per association.

ANALYSIS OF INCOME BY ASSOCIATIONS

Although the associations used the same basic accounting procedure, variations in technique occurred between associations. For example, the income from cut, wrap, freeze, and grind for association 2 appeared in the audit report as a net amount after the cost of cutting room supplies had been deducted from the gross income. The remaining associations, however, reported cut, wrap, freeze, and grind income and cutting room supplies as separate items. To make the data from association 2 comparable with those assembled from other associations, the gross income was used and the cost of supplies was set up under plant supplies in the expense statement.

Several associations were engaged in activities not related to their locker operation. All income and expense realized from these "outside" operations were excluded in this analysis.

In table 7, income is presented on a per-locker-rented basis. The associations were grouped according to the rates charged for cutting, wrapping, freezing, and grinding and then arrayed according to net savings per locker rented. The average income for each processing service is the average for only those plants offering the service. Thus, the sum of the averages exceeds the total average income per locker rented. By treating the data in this manner the reader is better able to determine the relative importance of each processing service.

Average gross income for the 25 associations analyzed amounted to \$23.09 per locker rented. The 15 associations charging \$2 per 100 pounds for "chill, cut, wrap, freeze, and grind," shown as group I in the table, averaged \$24.34 income per locker rented. The associations charging \$1.50 for these services, shown as group II, averaged \$20.79 income per locker rented.

Locker rental income averaged approximately 51 percent of gross income, comprising the largest source of revenue to the associations. Rental

Table 7. - Comparative analysis of income per locker rented in 25 Illinois cooperative locker associations

Associations	Rentals	Cut, wrap, freeze, and grind	Lard render	Cure and smoke	Slaughter	Fruits and vegetables	Poultry	Chilling and bulk storage	Inedible sales	Product sales ^a	Other sales ^a	Other income	Total income
Dollars													
Group I: ^b													
15.....	12.19	10.45	^c 0.44	1.83	^c (.13)	0.23	0.18	-	1.01	-	0.39	0.07	26.66
22.....	12.60	4.65	-	-	^c 2.96	1.45	-	-	1.60	0.97	0.80	0.16	25.19
20.....	12.41	7.17	0.70	1.26	^c 1.05	0.12	0.17	0.03	0.56	-	0.27	0.02	23.76
23.....	10.00	7.10	.85	1.33	1.36	0.80	-	-	1.05	-	0.33	2.30	25.12
5.....	11.57	9.05	-	2.07	^c (.06)	0.44	0.11	-	1.39	-	0.22	0.05	24.84
8.....	12.60	5.29	-	^c 0.11	-	0.36	0.31	-	0.59	-	-	0.06	19.32
2.....	11.49	8.53	0.23	2.42	-	0.14	0.18	-	0.62	(.03)	(.02)	0.13	23.72
25.....	10.60	8.77	-	1.85	-	0.58	0.28	-	0.35	(.04)	-	0.11	22.51
11.....	11.71	7.44	0.79	2.91	-	0.37	-	-	0.85	-	0.09	0.64	24.76
14 ^d	12.54	11.05	-	-	2.22	0.61	0.63	0.25	1.47	1.20	0.39	0.12	30.48
10.....	12.33	6.33	-	-	-	0.51	0.60	-	0.68	0.24	0.23	(f)	20.92
3.....	13.00	7.08	0.52	1.68	-	0.53	0.31	0.23	0.97	-	0.16	0.07	24.55
24.....	12.68	8.36	1.54	^c 0.01	5.13	0.19	0.30	0.67	1.71	-	0.14	(f)	30.73
13.....	12.59	7.62	0.72	^c 0.07	-	0.44	0.29	-	0.65	-	0.10	0.04	22.52
9.....	10.62	7.27	0.64	1.36	-	0.35	-	-	1.86	(.32)	0.57	0.72	23.07
Average.....	11.87	8.02	0.57	1.70	1.62	0.44	0.32	0.27	0.93	0.34	0.22	0.24	24.34
Group II:													
19.....	12.33	7.98	1.52	3.16	-	0.41	0.61	-	0.72	-	0.09	0.16	26.98
18.....	12.00	6.33	^c 0.15	0.09	-	0.21	-	0.99	0.76	-	0.31	0.06	20.90
21.....	10.19	4.38	-	-	-	-	-	-	0.53	-	-	0.05	15.15
1.....	10.20	5.63	0.91	3.10	-	0.28	0.08	0.08	0.58	(f)	0.13	(f)	20.99
16 ^e	10.33	7.83	^c 0.11	-	-	0.12	0.36	-	0.96	-	0.12	0.03	19.86
17.....	10.13	4.80	-	-	-	0.22	0.19	-	0.53	-	-	0.17	16.04
7.....	11.98	4.99	0.15	^c 0.27	-	0.15	-	0.71	0.56	-	-	0.06	18.87
6.....	12.40	4.92	0.67	0.73	-	0.44	0.16	-	0.69	-	0.15	0.07	20.23
12.....	12.69	6.71	0.52	1.05	-	1.45	0.48	-	0.63	-	1.43	0.25	25.21
4.....	10.56	5.28	-	1.41	-	0.21	0.17	(f)	0.22	0.17	0.14	0.05	18.21
Average.....	11.38	5.88	0.60	1.50	-	0.42	0.26	0.39	0.61	0.06	0.36	0.08	20.79
Combined average ^g ..	11.69	7.27	0.58	1.63	1.62	0.43	0.30	0.33	0.82	0.26	0.26	0.18	23.09

^a Income after deducting cost of sales.^b Associations grouped according to rate charged for chill, cut, wrap, freeze, and grind; group I, \$2 per 100 pounds; group II, \$1.50 per 100 pounds.^c Net income when done by other than plant employee.^d Rate for chill, cut, wrap, freeze, and grind, \$2.50 per 100 pounds.^e Rate for chill, cut, wrap, freeze, and grind, \$1.75 per 100 pounds.^f Less than 1 cent per locker rented.^g Average income per locker from each processing service computed on basis of total lockers rented in associations furnishing the particular service. Total average income computed on basis of total lockers rented in all associations.

Source of data: Based on audit reports.

income ranged from a low of \$10 in association 23 to \$13 in association 3. Locker rental income per locker rented is actually the average locker rental rate for each association.

Income per locker rented from cut, wrap, freeze, and grind varied widely among the associations. In group I the income from this source ranged from \$4.65 per locker rented in association 22, to \$11.05 in association 14. The entire group of 15 plants averaged \$8.02 per locker rented. Despite the very low income from this source, association 22 was able to effect savings of \$4.57 per locker rented. This is attributed to the relatively low labor cost and the substantial income from slaughtering.

The high income of association 14 can be attributed partly to the fact that the association charged \$2.50 per 100 pounds for chill, cut, wrap, freeze, and grind. Total income for the association was \$30.48 per locker rented - the second highest income among the 25 associations. The expected savings, however, were greatly reduced by the high cost of labor, amounting to \$13.92 per locker rented.

Association 24 had the largest gross income of any association - \$30.73 per locker rented - but again high labor costs plus expensive plant repairs reduced net savings for the association well below the average for the group.

In group II cut-wrap-freeze-and-grind income ranged from \$4.38 in association 21 to \$7.98 in association 19, and averaged \$5.88 per locker rented. The low average income was partly because the group charged only \$1.50 for this service and partly because the volume of product was somewhat less than in group I.

Slaughtering income averaged \$1.62 per locker rented for the seven associations providing the service. Associations 15, 20, and 5 contracted for slaughtering service with local slaughterers. The remaining four associations supplied the personnel for the work. Associations 5 and 15 experienced losses from slaughtering. Association 5, however, corrected this situation by using association-hired personnel in their slaughter plant.

Fruit and vegetable processing and freezing still remains relatively unimportant as a source of income to the associations. Average income from this source amounted to only 43 cents per locker rented. As most plant operators feel that fruit and vegetable processing is unprofitable, little attention is paid to building up such volume.

Inedible-byproduct sales (including profit on hides) of 82 cents per locker rented was on the average the fifth largest source of revenue. It exceeded the income from rendering, fruits and vegetables, poultry, chilling, and bulk storage, and other sales in most plants. This income ranged from \$1.86 per locker rented in association 9 to 22 cents in association 4. It should be pointed out that a general correlation exists between high income from inedible sales and the associations

Table 8. - Comparative analysis of expenses per locker rented in 25 Illinois cooperative locker associations

Associations	Dollars										Directors per diem, legal and audit
	Salaries and wages	Power and light	Heat and water	Laundry	Plant supplies	Plant repairs	Licenses and taxes	Bonding and insurance	Educational and promotional		
Group I:											
15.....	10.29	1.82	0.14	0.37	1.66	0.54	0.14	0.24	0.33	0.39	
22.....	8.73	2.18	(^a)	0.12	1.18	0.41	0.49	0.44	0.18	1.11	
20.....	9.39	2.04	0.59	0.04	1.68	0.25	0.27	0.57	0.13	0.23	
23.....	10.57	1.14	0.64	0.18	1.08	0.39	0.52	0.22	0.12	1.02	
5.....	10.15	1.84	0.43	0.21	2.08	1.54	0.74	0.48	0.22	0.42	
8.....	7.50	1.68	0.32	0.09	1.00	0.69	0.98	0.18	0.37	0.65	
2.....	10.73	1.50	0.47	0.17	1.35	0.46	0.50	0.39	0.29	0.22	
25.....	9.55	2.71	(^a)	0.12	2.26	0.25	0.56	0.47	0.19	0.11	
11.....	10.90	2.09	0.67	0.05	1.22	0.84	0.62	0.51	0.41	0.63	
14.....	13.92	1.92	0.43	0.23	0.63	0.45	1.08	0.26	0.29	0.81	
10.....	10.37	1.35	0.14	0.14	1.03	0.17	0.97	0.45	0.19	0.39	
3.....	11.83	2.81	(^a)	0.14	1.24	0.83	0.70	0.45	0.44	0.55	
24.....	15.59	2.39	0.88	0.23	1.34	2.02	0.63	0.40	0.25	0.39	
13.....	10.98	2.79	0.31	0.29	1.90	0.40	0.45	0.59	0.24	0.31	
9.....	11.08	2.08	0.60	0.14	1.38	1.01	0.80	0.39	0.10	0.89	
Average.....	10.84	2.01	0.45	0.16	1.38	0.64	0.68	0.40	0.28	0.49	
Group II:											
19.....	11.32	2.03	0.40	0.32	2.11	0.31	0.72	0.49	0.55	0.74	
18.....	8.03	2.35	0.04	0.20	0.98	0.50	0.93	0.19	0.17	0.42	
21.....	6.69	1.19	0.55	0.12	1.26	-	0.43	0.25	0.21	0.31	
1.....	9.86	1.60	0.49	0.22	1.22	0.57	0.50	0.33	0.19	0.20	
16.....	6.88	2.11	1.05	0.15	1.16	0.43	0.31	0.23	0.13	0.37	
17.....	6.47	1.16	0.34	0.13	0.69	0.25	0.41	0.29	0.17	0.35	
7.....	7.74	2.46	(^a)	0.11	1.15	0.27	0.57	0.37	0.19	0.76	
6.....	7.46	2.81	0.32	0.16	1.06	0.77	0.64	0.45	0.22	0.38	
12.....	11.60	3.02	0.30	0.16	2.02	0.83	0.90	0.42	0.23	0.50	
4.....	8.65	1.63	0.69	0.11	1.01	0.56	0.65	0.29	0.20	0.58	
Average.....	8.85	2.13	0.44	0.17	1.29	0.53	0.63	0.34	0.22	0.45	
Combined average.	10.14	2.05	0.44	0.17	1.35	0.60	0.66	0.38	0.26	0.48	

Table 8. - Continued

Associations	Office supplies and expense	Bad debts and losses	Truck, auto and mileage	Other expense	Depreciation and rent	Total operating cost	Interest	Income tax	Total expense	Net savings
Dollars										
Group I:										
15.....	0.45	-	0.02	0.47	3.64	20.50	-	-	20.50	6.16
22.....	0.57	0.15	0.63	-	2.81	19.00	-	1.62	20.62	4.57
20.....	0.55	-	-	0.54	2.22	18.50	1.32	-	19.82	3.94
23.....	1.04	0.28	-	1.49	2.16	20.85	1.04	-	21.89	3.23
5.....	0.49	0.18	0.31	(b)	1.94	21.03	0.25	0.89	22.17	2.67
8.....	0.45	0.03	0.12	0.04	1.68	15.78	0.09	0.86	16.73	2.59
2.....	0.56	0.05	0.42	0.07	2.93	20.11	0.26	0.87	21.24	2.48
25.....	0.42	-	0.02	-	2.43	19.09	0.18	0.81	20.08	2.43
11.....	0.42	0.01	0.40	0.01	2.67	21.45	0.14	0.79	22.38	2.38
14.....	0.95	0.21	1.02	-	4.93	27.13	(c)	1.02	28.15	2.33
10.....	0.36	-	0.20	0.18	2.22	18.16	0.19	0.64	18.99	1.93
3.....	0.67	-	0.35	0.02	2.91	22.94	0.26	0.34	23.54	1.01
24.....	0.83	0.04	0.11	1.23	2.64	28.97	0.48	0.32	29.77	0.96
13.....	0.50	-	-	-	2.77	21.53	0.36	0.16	22.05	0.47
9.....	0.97	-	0.19	-	3.12	22.75	0.22	-	22.97	0.10
Average.....	0.60	0.11	0.36	0.21	2.83	21.17	0.29	0.77	22.07	2.27
Group II:										
19.....	0.77	0.01	0.90	-	2.07	22.74	0.22	1.00	23.96	3.02
18.....	0.37	-	0.02	0.15	3.27	17.62	-	0.82	18.44	2.46
21.....	0.07	-	-	-	0.86	11.94	-	0.80	12.74	2.41
1.....	0.36	-	0.24	0.09	1.93	17.80	0.01	0.80	18.61	2.38
16.....	0.41	0.07	-	0.24	3.76	17.30	0.02	0.64	17.96	1.90
17.....	0.18	0.03	0.44	-	3.00	13.91	0.05	0.52	14.48	1.56
7.....	0.43	-	0.66	-	1.96	16.67	0.28	0.48	17.43	1.44
6.....	1.10	0.05	0.26	-	3.12	18.80	-	0.36	19.16	1.07
12.....	0.86	-	0.21	0.06	3.00	24.11	0.10	0.25	24.46	0.75
4.....	0.33	-	0.03	0.11	3.05	17.89	0.13	(b)	18.02	0.19
Average.....	0.53	0.04	0.32	0.12	2.59	18.46	0.11	0.56	19.10	1.69
Combined averaged.	0.57	0.09	0.34	0.18	2.74	20.22	0.23	0.63	21.03	2.06

^aCombined with power and light expense.

^bLess than one cent per locker rented.

^cAssociation 14 had interest income of \$1,433.93 and interest expense of \$1,064.42. As interest income is not income from locker operation it was disregarded in this analysis. Interest expense was also excluded as it probably would not be considered as locker plant expense but rather an expense incurred in earning the interest income. This association handled seed and feed. All income and expense connected with this operation were excluded.

^dAverage expense per locker rented for each particular item computed on basis of total lockers rented in associations having the particular expense. Total average computed on basis of total lockers rented in all associations.

Source of data: Audit reports of the associations.

furnishing slaughtering service. Boards of directors and plant managers contemplating slaughtering plants should keep in mind that a substantial income can be realized from the sale of inedible byproducts. If the associations have sufficient volume it might be worth while to investigate the possibility of rendering the offal for sale as grease and tannage. Substantial volume is necessary, however, to warrant an investment in rendering facilities.

The detail with which the data is presented in this table provides the associations with a key to possible weaknesses in their operation. Those associations with relative low income from one or more services would be justified in investigating their method of operation in an attempt to correct the situation.

ANALYSIS OF EXPENSE BY ASSOCIATIONS

The detailed analysis of association expenses and net savings is presented in table 8. Salaries and wages absorb approximately 44 percent of total income and average \$10.14 per locker rented. Labor costs in group I average \$2.99 more per locker rented than those in group II, due for the most part to greater volume of products handled and some inefficiency in the use of personnel. The problem of labor costs and efficiency is discussed more fully in a later section.

The second largest expense item is depreciation and rent. This cost item ranges from 86 cents per locker rented, in association 21, to \$4.93 in association 14, and averages \$2.74 per locker rented for the 25 associations. Renting of facilities at varying rates and possibly some variation in the rate used in computing depreciation account for some of the difference. The average depreciation rate for 17 associations that made no major additions to their plant facilities during the year was 5.6 percent. Eight associations that owned all their facilities averaged 5.1 percent and 9 associations renting part of their facilities averaged 6.0 percent. The higher rate in the latter group is due to a greater proportion of their investment represented by fast depreciating items such as refrigeration, transportation, and processing equipment, while in the former group of associations a large share of their investment is represented by buildings. In those plants with an exceptionally high depreciation and rent expense per locker there is the possibility that the facilities are not being used efficiently.

Power and light costs which amount to approximately 10 percent of all expenses range from a low of \$1.14 per locker rented in association 23 to a high of \$3.02 in association 12 and averaged \$2.05 per locker rented. Variations in power costs probably account for much of the difference in cost. Inefficient insulation and refrigeration also contribute to the wide variation. The difference in power costs between associations 23 and 12 is \$1.88 per locker rented or \$940 in a 500 locker plant. From this analysis it would appear that associations 12, 6, 13, and 3 would be justified in investigating the cause of the high power and light costs in their plants.

Plant supplies average \$1.35 per locker rented. The major items in this account are wrapping paper, wrapping twine, curing, and smoking supplies. As would be expected a correlation exists between cost of plant supplies and income from processing.

SAVINGS

Net savings for the 25 associations averaged \$2.06 per locker rented. Group I realized an average savings of \$2.27 per locker rented, due principally to the higher processing rate and greater volume of product rather than any greater efficiency over the associations in group II. Associations in group II averaged \$1.69 net savings per locker rented. Low rates for cut, wrap, freeze, and grind plus a limited number of processing services offered resulted in the low net savings. Smaller volume of product handled as compared with the associations in group II also contributed to the lower savings of this group.

Table 9. - Net savings as a percentage of gross income in 25 Illinois cooperative locker associations

Association	Gross income	Net savings before income tax and interest	Net savings after deduction of income tax and interest
	Dollars	Percent	Percent
15.....	12,317.74	23.10	23.10
22.....	10,581.08	24.59	18.16
20.....	6,770.95	22.13	16.57
21.....	5,971.04	21.23	15.92
8.....	19,665.22	18.31	13.38
23.....	14,318.99	17.01	12.88
18.....	18,102.24	15.68	11.76
1.....	33,815.01	15.22	11.35
19.....	18,669.07	15.71	11.17
25.....	36,920.09	15.19	10.78
5.....	27,890.62	15.35	10.74
2.....	63,231.80	15.21	10.47
17.....	6,433.50	13.28	9.71
11.....	28,499.52	13.38	9.61
16.....	10,742.25	12.86	9.58
10.....	23,157.90	13.20	9.23
14.....	48,703.99	11.00	7.63
7.....	18,492.31	11.62	7.61
6.....	19,520.08	7.06	5.29
3.....	39,102.29	6.55	4.11
24.....	13,060.03	5.71	3.12
12.....	25,895.97	4.37	2.99
13.....	13,941.62	4.42	2.11
4.....	15,370.26	1.78	1.05
9.....	16,913.56	1.40	0.42
Average.....	21,923.49	12.45	8.93

Source of data: Audit reports of the associations.

When analyzed on a percentage basis (table 9) it is found that net savings for the 25 associations averaged 12.45 percent of gross income before payment of income tax and interest and 8.93 percent after payment of these expenses. For the preceding year net savings of 20 of these associations averaged 18.02 percent of gross income before income tax and interest and 13.31 percent after payment.

The decline of approximately 4.5 percent in net savings as a percent of income can be attributed almost wholly to the increased cost of labor and management.

It is impossible in the space available to discuss fully the reasons for the relatively successful or unsuccessful operation of each association. In general, however, the substantial savings in associations 15, 22, 23, and 19 are due to the high income per locker rented and the relative efficient use of labor and management. Association 20 completed the year's operation with substantial savings despite high labor costs (see table 12) because expenses such as licenses and taxes, plant repairs, laundry, and other expense items were exceptionally low.

Associations 3, 6, 14, and 24 with better than average income per locker rented realized less than average net savings because of high labor and management costs. Associations 4, 7, 17, 9, and 13 suffered from high labor costs as well as low income. Association 21 had a net savings of \$2.41 per locker rented despite a very low income of only \$15.15 per locker rented. Very efficient use of labor together with low utility costs, licenses and taxes, and office expense permitted this association to operate profitably.

INVESTMENT AND NET SAVINGS

In table 10 net savings are compared with investment in fixed assets. Seventeen associations made no major additions to their plant facilities during the year analyzed. Thus, the data presented in this table is an accurate yardstick of the savings per dollar invested in fixed assets for each association. Net savings as a percentage of investment before payment of income tax and interest ranged from 21.89 percent in association 15 to 0.80 percent in association 4 and averaged 7.86 percent for the group. This savings represents a considerable decline from the 12.98 percent savings for the preceding year. Again this decline must be attributed almost wholly to the increased cost of labor and management.

PROCESSING VOLUME

Table 11 portrays the total pounds of meat and poultry processed for each association as well as the average pounds processed per locker rented. The 25 associations processed a total of 4,479 tons of meat and poultry and averaged 378 pounds per locker rented. Data for the preceding year indicates that 20 of these associations processed approximately 390 pounds per locker rented. (See figure 3.)

Table 10. - Net savings as a percentage of investment in fixed assets before deduction of income tax and interest for 17 Illinois cooperative locker associations^a

Association	Investment	Net savings	Net savings as a percent of investment
	Dollars		Percent
15.....	12,997.57	2,845.55	21.89
16.....	11,453.90	1,381.65	12.06
20.....	12,494.79	1,498.40	11.99
22.....	23,941.00	2,602.30	10.87
21.....	12,689.00	1,267.40	9.99
18.....	29,212.53	2,838.23	9.72
8.....	37,143.73	3,600.43	9.69
2.....	102,996.72	9,616.60	9.34
11.....	42,191.20	3,814.29	9.04
17.....	9,667.73	854.58	8.84
1.....	60,087.33	5,146.09	8.56
23.....	31,467.61	2,435.17	7.74
7.....	35,776.17	2,149.34	6.01
6.....	32,601.91	1,377.34	4.22
24.....	27,023.07	745.98	2.76
9.....	27,463.37	236.89	0.86
4.....	34,105.68	274.04	0.80
Total or average.....	543,313.31	42,684.28	7.86

^aDoes not include associations making major additions to facilities during their fiscal year.

Source of data: Audit reports of the associations.

Table 11. - Lockers rented, total poundage and pounds of meat and poultry processed per locker rented in 25 Illinois cooperative locker associations

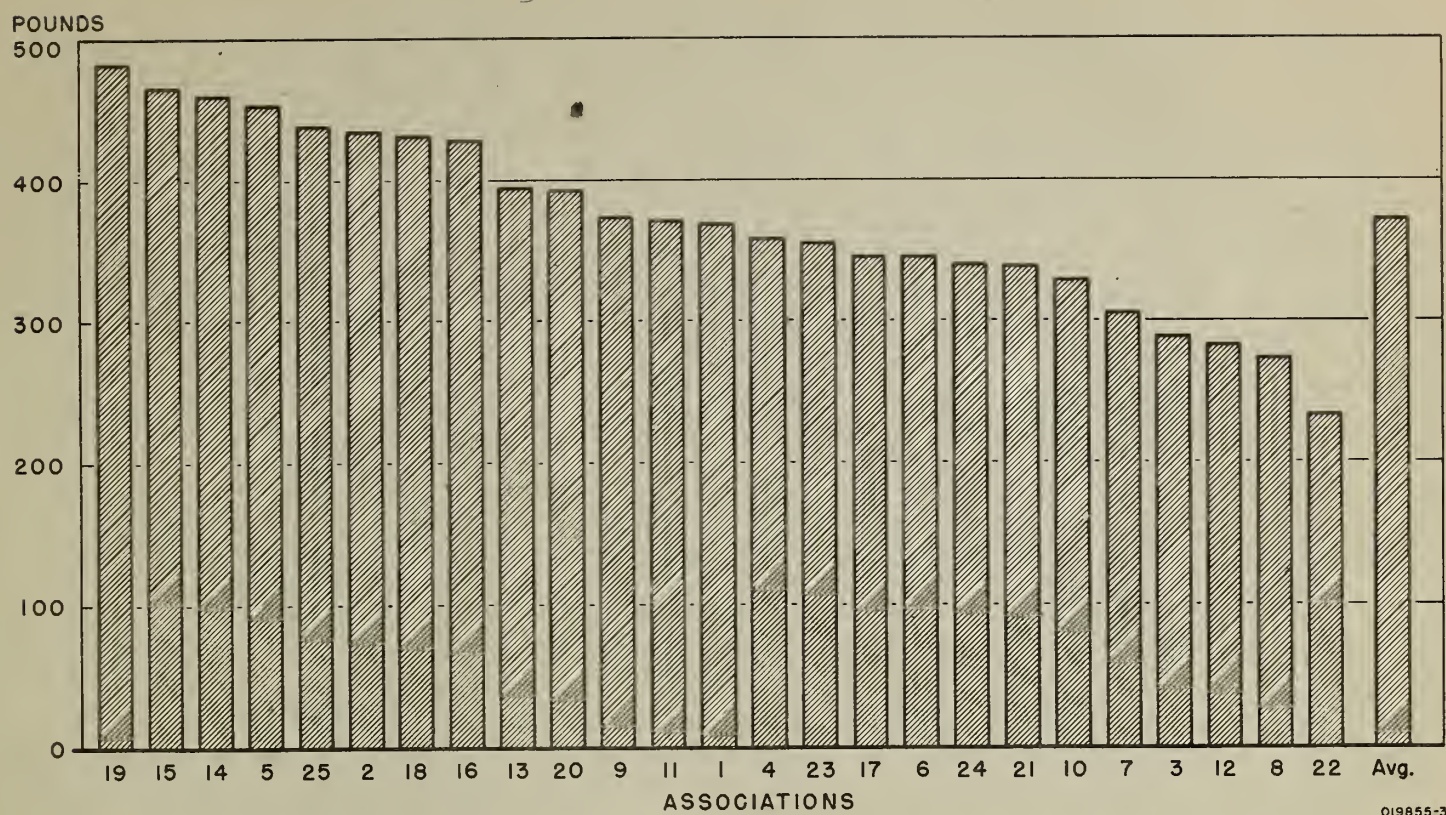
Associations	Lockers rented ^a	Total poundage ^b	Poundage per locker rented
19.....	692	333,199	482
15.....	462	^c 214,673	465
14.....	1,598	733,210	459
5.....	1,123	509,272	453
25.....	1,640	717,841	438
2.....	2,666	1,160,652	435
18.....	866	373,338	431
16.....	541	231,583	428
13.....	619	244,794	395
20.....	285	111,591	392
9.....	733	273,352	373
11.....	1,151	428,390	372
1.....	1,611	593,771	369
4.....	844	301,882	358
23.....	570	202,484	355
17.....	401	138,440	345
6.....	965	332,574	345
24.....	425	144,626	340
21.....	349	117,835	338
10.....	1,107	363,364	328
7.....	980	297,662	304
3.....	1,593	458,930	288
12.....	1,027	289,427	282
8.....	1,018	277,829	273
22.....	420	97,802	233
Total and average.....	23,686	8,948,521	378

^aTotal locker rented computed by dividing earned locker rental income by average rental rate. Includes some temporary lockers.

^bTotal poundage secured from association records or computed by dividing chill, cut, wrap, freeze, and grind income by rate for these services.

^cDoes not include approximately 55,000 pounds of meat processed for other than locker patrons.

Source of data: Field survey.



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Figure 3. - Pounds of meat and poultry processed per locker rented per year, 25 Illinois cooperative locker associations, 1944-45.

Pounds of meat and poultry processed varied from a high of 482 pounds per locker rented in association 19 to a low of 233 pounds in association 22. Eight associations processed over 400 pounds per locker rented while four associations processed less than 300 pounds per locker rented.

Table 15 in the appendix shows the average pounds processed per locker in select central processing plants. The average poundage should be interpreted as pounds processed not stored per locker. In those plants processing for branch plants the total poundage, including that stored in branch lockers, is divided by the number of lockers in the central plant only. In this way, it is possible to measure the possible influence of volume on power consumption in the central plant.

LABOR AND MANAGEMENT EFFICIENCY

Labor and management cost comprises on the average approximately 48 percent of all expenses in the 25 associations analyzed in tables 7 and 8. The percentage varies from 38 percent in association 16 to 54 percent in association 10. Wide variations in labor and management cost exist also between the individual plants of an association. For this reason it seems advisable to devise some means of measuring the efficiency of labor within the individual plants. Monthly variations in volume have a direct influence on labor cost, thus the data on labor and management cost are further analyzed on a monthly basis.

In making this comparative analysis of labor and management cost per dollar of processing income, it is recognized that part of the labor

Table 12. - Labor and management cost per dollar of processing income, by months, 1944-45

Plant and services ^a	January	February	March	April	May	June	July	August	September	October	November	December	Average
Dollars													
Group I ^b :													
Cut, wrap, freeze, and grind:													
2-C.....	0.63	0.71	0.54	0.63	0.71	0.87	1.27	0.97	1.10	1.17	1.05	1.02	0.83
2-A.....	0.75	0.85	0.68	0.74	0.92	0.79	1.00	1.05	1.01	0.94	0.93	0.82	0.84
5-A.....	0.85	0.84	0.75	0.80	0.73	0.88	0.97	0.95	0.97	0.88	1.11	1.33	0.90
2-B.....	0.82	0.75	0.70	0.78	0.96	1.28	1.37	1.53	1.42	1.30	1.45	0.98	1.02
12-B.....	0.77	0.91	0.95	1.45	1.31	0.64	2.20	1.26	2.11	3.71	1.46	0.86	1.15
2-F.....	1.05	0.93	0.89	0.92	1.10	1.33	1.62	1.18	2.41	1.50	1.51	1.47	1.20
8-A.....	0.94	1.29	1.05	1.39	2.30	1.85	1.36	1.01	1.65	1.24	1.20	0.99	1.26
11-D.....	0.72	0.84	0.79	0.70	2.53	1.02	1.66	2.50	2.48	2.09	2.10	0.70	1.29
10-C.....	1.09	1.17	1.25	1.57	1.45	2.77	2.81	1.50	4.63	1.65	1.23	1.01	1.48
10-A.....	1.14	1.27	1.51	1.32	1.67	2.46	2.33	1.37	3.76	1.49	0.93	1.28	1.49
Average.....	0.87	0.96	0.90	0.96	1.22	1.24	1.45	1.22	1.72	1.32	1.17	1.04	1.12
Cut, wrap, freeze, grind, render (or cure and smoke):													
15-A.....	0.58	0.74	0.56	1.04	0.83	1.02	0.76	1.07	1.16	0.83	0.93	0.48	0.78
2-D.....	0.82	0.66	0.48	0.66	0.65	0.79	1.08	1.12	1.25	1.52	1.26	0.84	0.81
25-B.....	0.69	0.72	0.68	0.79	0.90	0.72	1.14	2.96	0.58	0.98	1.02	0.86	0.82
25-C.....	0.74	0.68	0.64	0.75	0.80	0.68	1.07	1.13	1.35	1.02	0.89	0.86	0.84
25-A.....	0.62	0.66	0.64	0.70	0.92	0.63	1.09	1.50	1.26	1.02	1.15	0.92	0.85
2-F.....	0.77	1.24	0.68	0.74	1.11	1.05	1.44	1.74	1.68	0.98	1.13	0.94	1.03
13-A.....	0.93	1.08	1.37	0.80	1.24	0.94	1.15	0.93	2.73	1.71	1.04	1.09	1.14
Average.....	0.73	0.75	0.68	0.76	0.90	0.80	1.07	1.28	1.25	1.12	1.06	0.83	0.88
Cut, wrap, freeze, grind, render, cure and smoke:													
11-A.....	0.54	1.01	0.63	0.56	0.86	0.83	1.15	1.29	1.72	1.49	1.26	0.71	0.88
3-B.....	0.59	0.66	1.03	1.24	1.30	1.97	0.74	1.76	1.73	0.98	0.83	0.82	0.99
3-A.....	0.61	0.64	1.14	1.88	0.74	1.09	0.99	1.67	2.49	1.79	1.41	1.04	1.09
9-A.....	0.93	0.78	0.72	1.17	2.04	0.87	1.69	1.39	2.12	1.30	1.05	1.68	1.17
20-A.....	0.52	0.72	1.26	1.87	7.35	3.88	3.16	0.91	2.26	0.92	0.82	0.92	1.17
Average.....	0.64	0.76	0.84	0.98	1.06	1.08	1.16	1.42	2.06	1.36	1.14	1.03	1.03
Cut, wrap, freeze, grind, slaughter, render, and/or cure and smoke:													
5-B.....	0.82	0.99	1.02	0.87	0.83	0.54	0.72	1.07	1.03	0.93	1.05	1.28	0.90
23-A.....	0.54	0.80	0.80	0.91	1.19	0.84	1.00	1.22	1.25	1.10	0.97	0.85	0.91
22-A.....	0.73	0.70	0.90	1.45	0.78	0.89	0.96	0.95	1.99	1.99	1.48	0.96	0.97
14-A ^c	0.82	1.01	0.87	1.05	0.90	0.95	0.97	1.57	1.39	1.36	1.18	0.96	1.04
24-A.....	0.64	0.81	1.31	1.09	0.89	2.44	1.02	1.07	1.56	1.45	1.10	1.11	1.05
14-B ^c	0.93	0.91	1.01	1.02	0.99	1.13	1.12	1.66	1.10	1.37	1.62	0.96	1.10
14-C ^c	0.80	1.23	0.96	1.17	1.28	1.13	1.31	1.36	1.56	1.83	1.45	1.15	1.20
Average.....	0.75	0.92	0.96	1.02	0.96	0.91	0.97	1.25	1.29	1.29	1.21	1.04	1.02
Average - Group I.....	0.75	0.85	0.84	0.92	1.02	0.98	1.13	1.28	1.52	1.27	1.15	0.99	1.01

Group II ^d :														
Cut, wrap, freeze, and grind:														
16-A ^e	0.55	0.86	0.83	0.88	0.85	0.84	0.86	0.78	0.92	0.90	0.64	1.11	0.82	
18-B.....	0.50	0.67	0.82	1.24	1.25	1.20	1.29	1.76	1.43	0.79	1.07	0.66	0.93	
1-C.....	0.81	0.88	1.01	0.86	0.98	0.96	1.21	1.34	2.21	0.96	1.12	1.25	1.06	
1-A.....	0.68	0.87	1.09	1.08	0.86	1.26	2.00	1.85	1.19	1.13	1.20	1.39	1.12	
1-B.....	1.10	0.91	1.23	0.90	1.15	1.04	1.39	1.19	2.21	1.07	1.26	1.32	1.16	
18-A.....	0.96	1.00	1.13	1.54	1.97	1.13	1.29	1.60	2.13	1.42	1.16	0.97	1.23	
17-A.....	0.89	0.65	0.87	1.31	1.81	1.54	1.32	2.54	2.12	1.47	1.30	1.36	1.24	
4-A.....	1.03	0.83	0.60	1.35	1.55	1.77	1.78	1.78	2.39	1.86	1.77	1.03	1.25	
6-B.....	1.07	0.93	0.92	1.06	1.81	1.39	1.53	1.80	0.97	1.51	1.68	0.95	1.25	
21-A.....	1.20	1.34	1.20	2.12	1.57	1.36	2.01	2.35	1.62	1.72	2.55	1.36	1.60	
Average.....	0.83	0.88	0.96	1.12	1.24	1.19	1.37	1.50	1.61	1.19	1.21	1.11	1.12	
Cut, wrap, freeze, grind, render (or cure and smoke):														
4-B.....	0.82	1.06	0.82	0.84	1.81	2.26	1.72	1.75	2.74	2.74	1.37	0.82	1.24	
7-A.....	0.98	0.92	1.19	1.25	1.18	1.22	1.57	1.85	2.80	1.56	1.67	1.33	1.35	
Average.....	0.90	0.98	0.99	1.04	1.43	1.48	1.62	1.81	2.78	1.93	1.54	1.11	1.31	
Cut, wrap, freeze, grind, render, cure and smoke:														
12-A.....	0.52	0.58	0.62	1.08	0.84	0.52	0.86	0.67	1.10	1.33	0.67	0.51	0.71	
1-D.....	0.50	0.58	0.63	0.59	0.68	0.80	1.20	0.88	1.32	0.86	0.70	0.93	0.73	
19-A.....	0.60	0.65	0.58	1.00	1.20	0.95	0.96	1.02	1.31	1.08	0.64	0.66	0.82	
6-A.....	0.85	0.51	0.75	0.99	0.93	0.91	1.16	1.39	1.05	0.52	1.33	1.01	0.92	
Average.....	0.59	0.60	0.63	0.85	0.90	0.77	1.01	0.93	1.22	1.00	0.75	0.71	0.78	
Average - Group II.....	0.74	0.79	0.83	1.00	1.12	1.02	1.25	1.27	1.58	1.20	1.05	0.94	1.01	
Combined average.....	0.75	0.83	0.83	0.94	1.05	0.99	1.16	1.28	1.53	1.25	1.12	0.97	1.01	

^aSee footnote a, table 3.

^bGroup I: Plants where rate is \$2.00 per 100 pounds to chill, cut, wrap, freeze, and grind.

^cCharged \$2.50 per 100 pounds per chill, cut, wrap, freeze, and grind.

^dGroup II: Plants where rate is \$1.50 per 100 pounds to chill, cut, wrap, freeze, and grind.

^eCharged \$1.75 per 100 pounds for chill, cut, wrap, freeze, and grind.

Source of data: Field survey.

expense should be charged to sales and the operation of the locker room. These two income items, however, were excluded because:

1. The amount of labor chargeable to the locker is relatively insignificant.
2. Average locker rental rates vary as much as \$3 per locker between associations and this variation would detract from the value of the comparison.
3. Locker rentals comprise approximately one-half of total income, therefore, if rental income was included it would obscure the monthly variation in processing income.
4. The price per pound received for inedible sales varies between plants thus introducing an additional variable into the analysis.

Although there may be some error in this method of analysis, it is felt that processing income provides the most satisfactory basis for measuring labor and management efficiency in these plants.

Table 12 is designed so that labor and management efficiency can be compared between plants having the same processing rates and offering the same processing services. (See figure 4.)

The plants charging \$2 per 100 pounds for chill, cut, wrap, freeze, and grind are shown in group I and those plants charging \$1.50 for these services are shown in group II. The plants are then further grouped

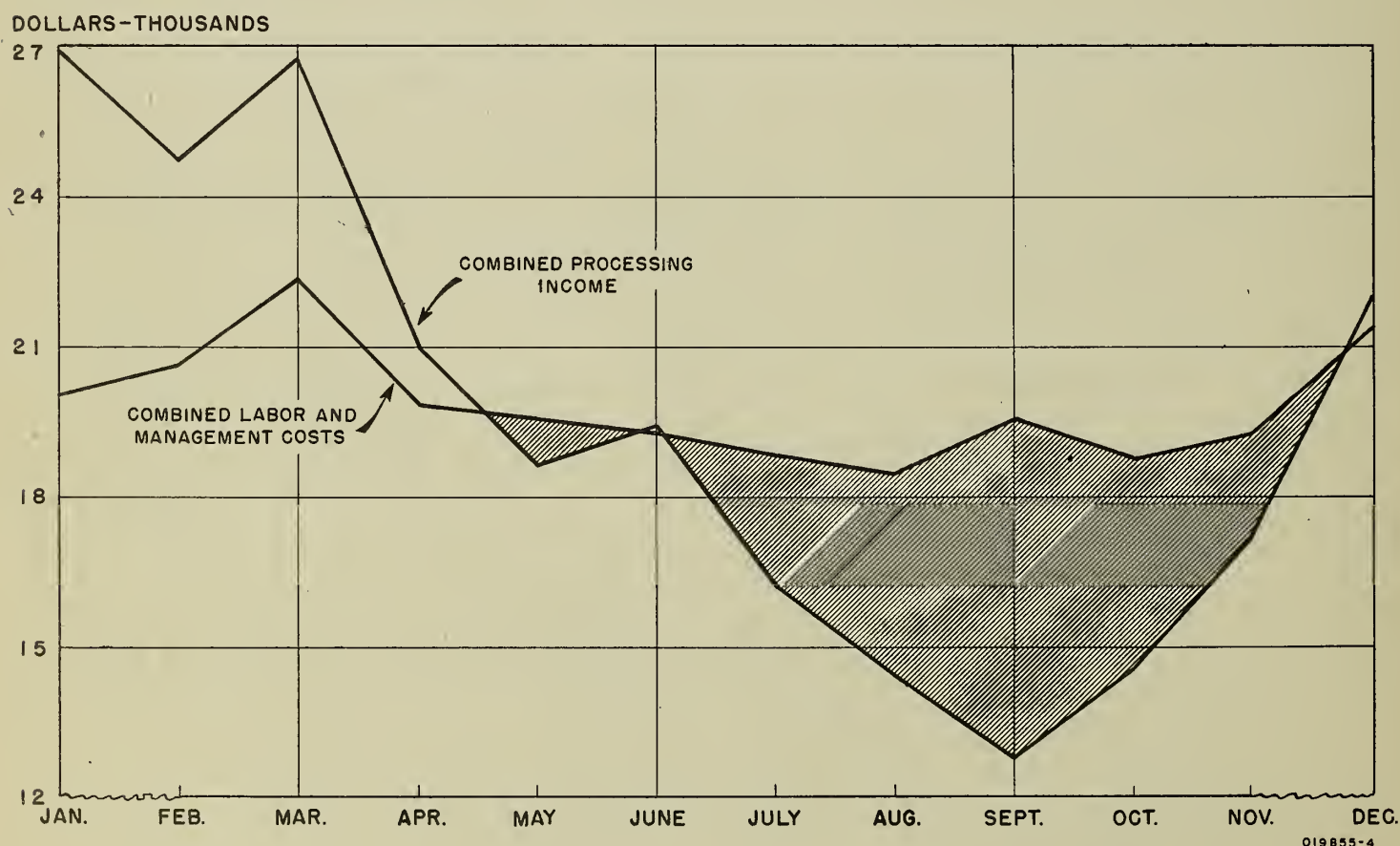


Figure 4. - Labor and management costs compared with processing income, 45 Illinois cooperative locker plants, 1944-45.

according to the number of additional services offered such as curing, smoking, lard rendering, or slaughtering. Where an association operated more than one plant under county management, the overhead management and bookkeeping costs were allocated to the various plants according to gross processing income of each plant.

Plants that cured, smoked, or rendered lard for other plants in the association were credited with three-fourths of the income received by the latter plant. The remaining one-fourth of the income was credited to the plant not performing the service as their income for acting as agent for the patron.

It is significant to note that the average labor and management cost of \$1.01 per dollar of processing income is the same in those plants charging \$2 per 100 pounds for chill, cut, wrap, freeze, and grind as in those plants charging \$1.50 for these services. Although the latter group of plants receive one-fourth less than the former group for the same amount of work performed, the labor and management cost per dollar of processing income was no higher than in those plants charging \$2 for the services. This indicates that for each dollar expended for labor one-third greater productivity was realized by this group of plants.

The data in table 12 indicate that labor and management cost in the summer months are over twice as much as in the winter months, due primarily to the seasonal fluctuations in volume of meats and the relatively low income realized from fruit and vegetable processing.

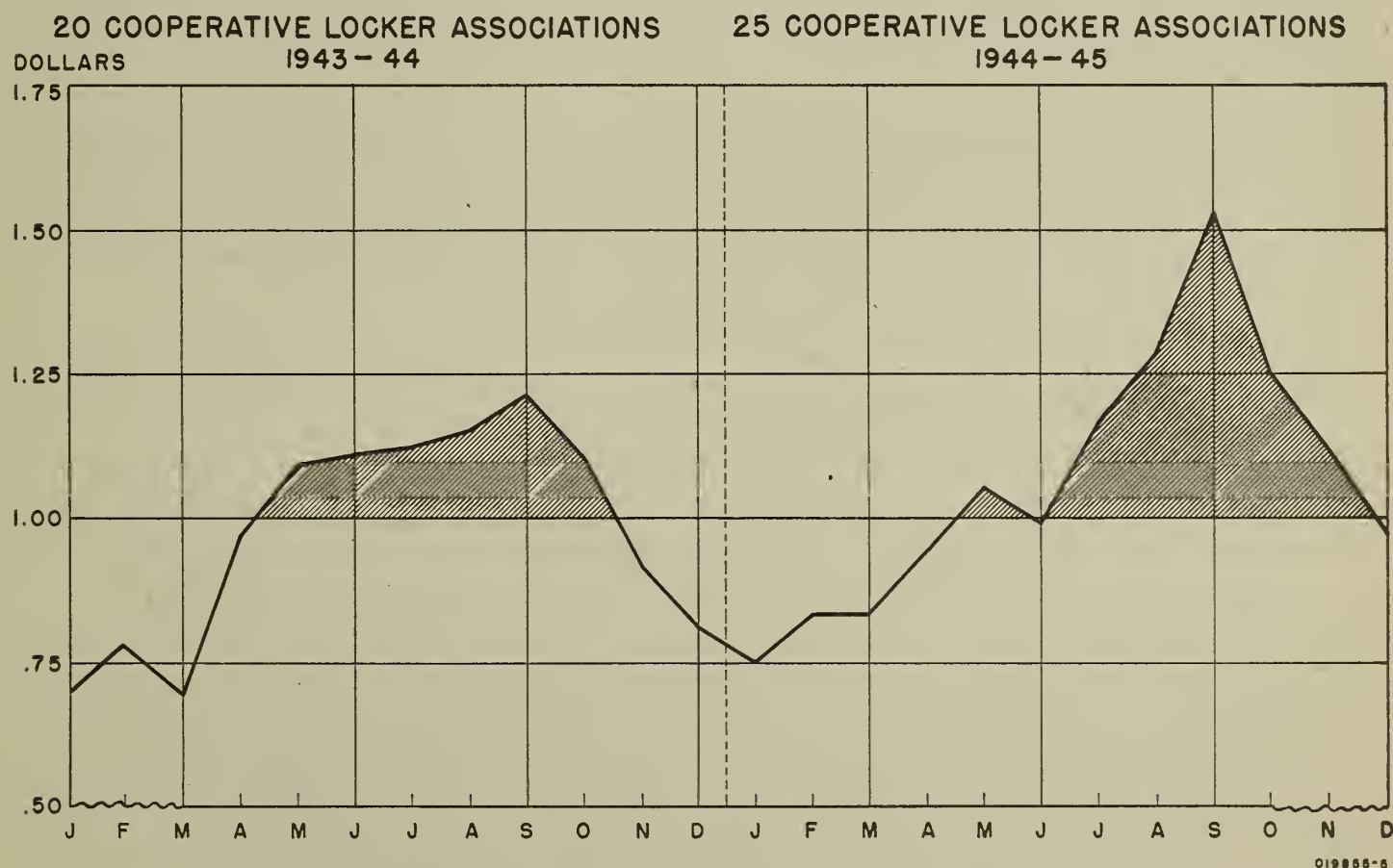


Figure 5. - Labor and management cost per dollar of processing income, 1943-44 and 1944-45.

The combined average of labor and management cost per dollar of processing income ranged from \$0.75 in January to \$1.53 in September (see figure 5). In some plants the variation from month to month was not sufficient to affect total labor cost adversely, while in other plants the labor cost is from four to five times higher in some months than in others. This condition results in such high labor costs per dollar of processing income that these associations should take measures to level out their volume and correct these variations.

In table 13 labor and management cost per dollar of processing income for the year under analysis is compared with labor cost for the previous year (see also figure 5). Only those plants having complete processing income and labor cost data for the 2 years were included in this table. Nine of the thirty-three plants reduced their labor cost per dollar of processing income while the labor cost increased in twenty-four plants. On the average, labor and management cost increased seven cents per dollar of processing income over the previous year.

Total gross income for the 33 plants increased by 10.2 percent over the previous year while labor and management cost increased 18.1 percent. An analysis of the nine plants that succeeded in reducing their labor cost over the previous year revealed that while processing income increased by 23.8 percent, the labor and management cost increased by only 13.4 percent.

The four plants with the highest percentage of increase (over 30 percent) in labor and management cost suffered a decline in total processing income of 8.2 percent while labor and management cost increased by 27.1 percent.

This situation resulted in an average increase in labor and management cost from \$0.66 to \$0.92 per dollar of processing income. It is significant to note however that this group of plants, while experiencing a 27 percent increase in labor cost, are still well below the average for the entire group.

From the analysis of these data it is evident that the major difficulties encountered by most associations in operating their processing rooms profitably are insufficient volume of products in one or more of the association's plants and wide fluctuations in volume from month to month. To eliminate this weakness in the plant operation the board of directors and plant managers should give serious consideration to increasing labor efficiency and building up their volume of business.

Many associations now operating complete processing rooms in two or more of their locker plants are considering the possibilities of combining their entire processing operation, including slaughtering, in one centralized location. The existing processing and high temperature rooms would then be insulated for additional low temperature storage space. Centralized processing offers greater use of equipment, permits more flexibility in the use of personnel, and eliminates the condition wherein one plant may be overcrowded and overworked while at the same time another plant may have surplus processing facilities and personnel.

Table 13. - Labor and management cost per dollar of processing income, in 33 Illinois cooperative locker plants 1943-44 and 1944-45^a

Plant ^b	1943-44	1944-45	Increase or decrease	
	Dollars			Percent
15 - A.....	0.58	0.78	0.20	34.5
5 - A.....	0.64	0.90	0.26	40.6
6 - A.....	0.69	0.92	0.23	33.3
2 - D.....	0.72	0.81	0.09	12.5
11 - A.....	0.73	0.88	0.15	20.5
1 - D.....	0.73	0.73	-	-
5 - B.....	0.74	0.90	0.16	21.6
12 - A.....	0.77	0.71	-0.06	-7.8
19 - A.....	0.79	0.82	0.03	3.8
25 - A.....	0.81	0.85	0.04	4.9
2 - C.....	0.84	0.83	-0.01	-1.2
2 - A.....	0.85	0.84	-0.01	-1.2
25 - C.....	0.88	0.84	-0.04	-4.5
6 - B.....	0.90	1.25	0.35	38.9
2 - E.....	0.90	1.03	0.13	14.4
2 - B.....	0.95	1.02	0.07	7.4
25 - B.....	0.96	0.82	-0.14	-14.6
1 - C.....	0.98	1.06	0.08	8.2
9 - A.....	1.01	1.17	0.16	15.8
18 - B.....	1.02	0.93	-0.09	-8.8
3 - A.....	1.03	1.09	0.06	5.8
1 - A.....	1.04	1.12	0.08	7.7
18 - A.....	1.05	1.23	0.18	17.1
3 - B.....	1.05	0.99	-0.06	-5.7
4 - A.....	1.06	1.25	0.19	17.9
2 - F.....	1.10	1.20	0.10	9.1
1 - B.....	1.13	1.16	0.03	2.6
17 - A.....	1.15	1.24	0.09	7.8
8 - A.....	1.19	1.26	0.07	5.9
7 - A.....	1.22	1.35	0.13	10.6
10 - A.....	1.27	1.49	0.22	17.3
13 - A.....	1.29	1.14	-0.15	-11.6
4 - B.....	1.48	1.24	-0.24	-16.2
Average.....	0.92	0.99	0.07	7.6

^aIncludes only those plants having complete processing income and labor cost data for the 2 years.

^bSee footnote a, table 3.

Source of data: Field survey.

Those associations suffering from a severe volume decline in the summer months may wish to engage in semi-commercial processing and marketing operations to utilize their personnel and equipment during the slack periods. The processing and marketing of poultry on a small scale will fit readily into locker operation. The purpose of this undertaking is merely that of utilizing otherwise idle personnel and should not be allowed to interfere with the proper operations of the locker plant.

With relatively small additional investment in equipment the association can process and market dressed, drawn, or frozen poultry. Poultry may be purchased and processed in the summer months and stored in bulk storage for resale in the winter months. Furthermore, it may be feasible for some associations to market eggs and live poultry. This type of operation, however, assumes the aspects of a year-round operation and should be approached with caution.

Many associations may further increase their volume of business by processing and freezing quantities of fruits and vegetables in season for resale out of season to locker patrons or possibly to local retail outlets, restaurants, hotels, and bakeries.

POWER CONSUMPTION

Power and light costs are on the average the third largest expense item in locker plant operation. These costs ranged from \$1.14 per locker rented in association 23 to \$3.02 per locker rented in association 12 (see table 8). Due to the wide variation in power consumption between plants, a special monthly analysis was made of kilowatt-hour consumption per locker of capacity in 35 plants having complete monthly power data (table 14). These data indicate that power consumption ranged from 32 to 82 kilowatt-hours per locker of capacity per year and averaged 59 kilowatt-hours per year.

The 10 plants with the lowest power consumption ranged from 32 to 51 kilowatt-hours per locker per year. Eight of the 10 plants processed for their lockers only, 1 plant processed for additional lockers in a branch plant, and 1 plant furnished curing facilities for a second plant in the association. When analyzed on a basis of services rendered, it is found that 4 plants had curing rooms and 3 of these plants cured for their patrons only.

Among the 10 plants with the highest power consumption per locker are 6 plants that chill, cut, wrap, freeze, and grind for branch plants, 1 plant that cures for 3 additional plants, and 1 plant that processes large quantities of beef and pork for local markets. Five of the plants furnish curing service in addition to the chill, cut, wrap, freeze, and grind services.

It is evident from this description of plant facilities and services that care must be exercised in making a comparative analysis of power consumption among the various plants. On the other hand, it is believed that factors other than processing volume account for much of

Table 14. - Kilowatt-hours of electricity used per locker based on total capacity by 35 cooperative locker plants in Illinois, by months^a

Plant ^b	January	February	March	April	May	June	July	August	September	October	November	December	Total
17 - A.....	2.05	3.01	2.46	2.80	2.66	3.60	2.75	1.75	2.33	2.57	3.02	2.59	31.59
10 - A.....	2.59	1.80	1.99	2.36	2.59	2.69	2.42	2.81	3.47	3.72	3.03	2.15	31.62
10 - C.....	2.66	2.50	2.50	2.56	3.66	3.70	3.83	3.98	3.08	2.74	2.32	2.35	35.88
1 - C.....	2.77	3.23	3.91	3.01	3.86	4.91	4.55	3.88	4.02	3.08	3.16	2.75	43.13
25 - B.....	2.87	3.87	3.62	4.28	4.43	4.68	3.07	3.37	4.56	3.44	2.83	2.57	43.59
25 - A.....	2.98	3.67	3.45	4.14	4.17	4.86	5.14	4.05	3.82	3.55	3.62	3.20	46.65
4 - B.....	3.88	4.13	2.97	4.24	3.51	5.29	5.24	4.73	5.44	3.77	3.72	3.26	50.18
2 - C.....	3.53	3.27	4.49	4.10	5.64	5.48	4.96	5.07	4.31	3.26	3.46	2.88	50.45
1 - B.....	2.88	2.69	3.35	4.24	4.82	5.99	5.94	6.32	4.48	3.77	3.99	2.65	51.12
25 - C.....	3.56	4.19	3.57	4.78	4.28	5.15	5.74	4.95	4.35	3.80	3.72	3.18	51.27
14 - C.....	2.94	3.96	5.17	4.87	4.14	5.40	5.53	4.75	4.20	3.76	4.07	3.02	51.81
2 - A.....	4.00	4.07	4.55	4.91	5.16	4.54	5.04	5.16	4.33	4.02	3.68	3.71	53.17
1 - A.....	3.00	4.03	4.34	3.78	4.62	6.08	5.22	5.70	5.13	4.29	4.47	3.41	54.07
23 - A.....	3.24	3.45	3.75	4.11	5.42	7.31	5.01	6.79	5.05	3.40	3.66	3.01	54.20
18 - B.....	4.49	4.13	3.83	2.98	4.72	5.96	5.71	6.31	5.62	4.84	4.08	3.74	56.41
19 - A.....	4.37	4.42	5.15	4.37	5.80	6.37	5.52	5.26	4.89	3.80	3.72	3.81	57.48
18 - A.....	5.88	5.15	4.88	4.51	3.88	3.44	6.50	5.13	4.85	4.80	4.75	5.04	58.81
20 - A.....	3.06	4.95	4.50	3.94	3.87	4.15	5.18	5.33	7.88	5.80	5.74	6.73	61.13
2 - D.....	3.73	4.93	5.99	5.76	5.51	6.10	6.02	6.48	5.17	4.25	4.51	4.17	62.62
11 - A.....	4.19	4.00	3.88	4.04	6.26	7.76	7.32	6.22	5.23	4.73	5.00	4.12	62.75
24 - A.....	4.67	4.00	4.16	5.21	4.54	3.63	7.71	7.77	7.65	4.75	4.92	3.91	62.92
14 - B.....	4.09	4.68	5.40	6.20	5.44	6.72	6.70	6.36	5.15	3.96	4.54	4.06	63.30
2 - F.....	5.68	5.25	6.55	6.31	5.63	6.29	6.04	6.65	5.62	5.21	5.79	3.87	68.89
2 - E.....	4.29	4.69	7.32	5.68	7.69	7.64	8.15	7.07	5.78	5.18	3.76	3.34	70.59
8 - A.....	5.13	4.93	6.25	6.14	6.16	6.59	5.97	5.86	6.90	5.98	6.09	4.96	70.96
22 - A.....	3.66	5.30	5.41	4.39	5.10	8.80	6.75	7.92	7.41	5.71	5.66	5.38	71.49
12 - A.....	6.42	6.50	6.26	6.00	5.99	7.12	5.04	5.63	4.94	4.48	7.75	6.39	72.52
4 - A.....	5.26	9.55	7.03	9.89	4.71	4.88	6.09	5.94	5.98	5.14	4.48	5.01	72.96
6 - A.....	4.63	4.19	4.80	5.03	5.69	7.30	8.40	9.34	7.32	5.82	5.31	5.18	73.01
7 - A.....	3.26	3.64	5.25	7.08	6.04	8.39	9.93	8.12	6.93	7.27	5.61	3.26	74.78
9 - A.....	5.71	6.95	7.91	6.86	6.83	7.42	5.03	7.67	3.70	6.17	5.14	5.86	75.25
12 - B.....	5.57	6.56	6.25	6.19	6.53	6.68	6.78	9.21	6.30	6.73	5.60	5.60	78.00
5 - A.....	4.67	5.78	6.42	6.04	7.48	7.42	8.63	8.97	7.54	6.75	6.25	4.95	80.90
15 - A.....	5.51	5.67	3.87	6.00	6.66	8.98	9.07	10.72	6.80	5.42	7.37	5.13	80.90
1 - D.....	4.44	5.17	7.29	7.39	7.84	10.28	8.65	8.86	5.93	5.82	6.15	4.55	82.37
Average.....	4.04	4.40	4.71	4.90	5.10	5.91	5.81	5.86	5.21	4.58	4.59	3.95	59.06

^aPlants that expanded during the year or with incomplete data were necessarily excluded.

^bSee footnote a, table 3.

Source of data: Field survey.

the variation in power consumption. Unsatisfactory water conditions, unbalanced or insufficient refrigeration equipment, and inefficient insulation contribute to this variation (figure 6). Among the more efficient plants it will be noted that power consumption in the summer months is only 1 to 2 kilowatts per locker higher than in the winter months while in the plants with high power consumption the range is from 2 to 5 kilowatt-hours higher. This would seem to indicate that heat leakage and water temperatures were marked and action should be taken to correct these conditions if possible.

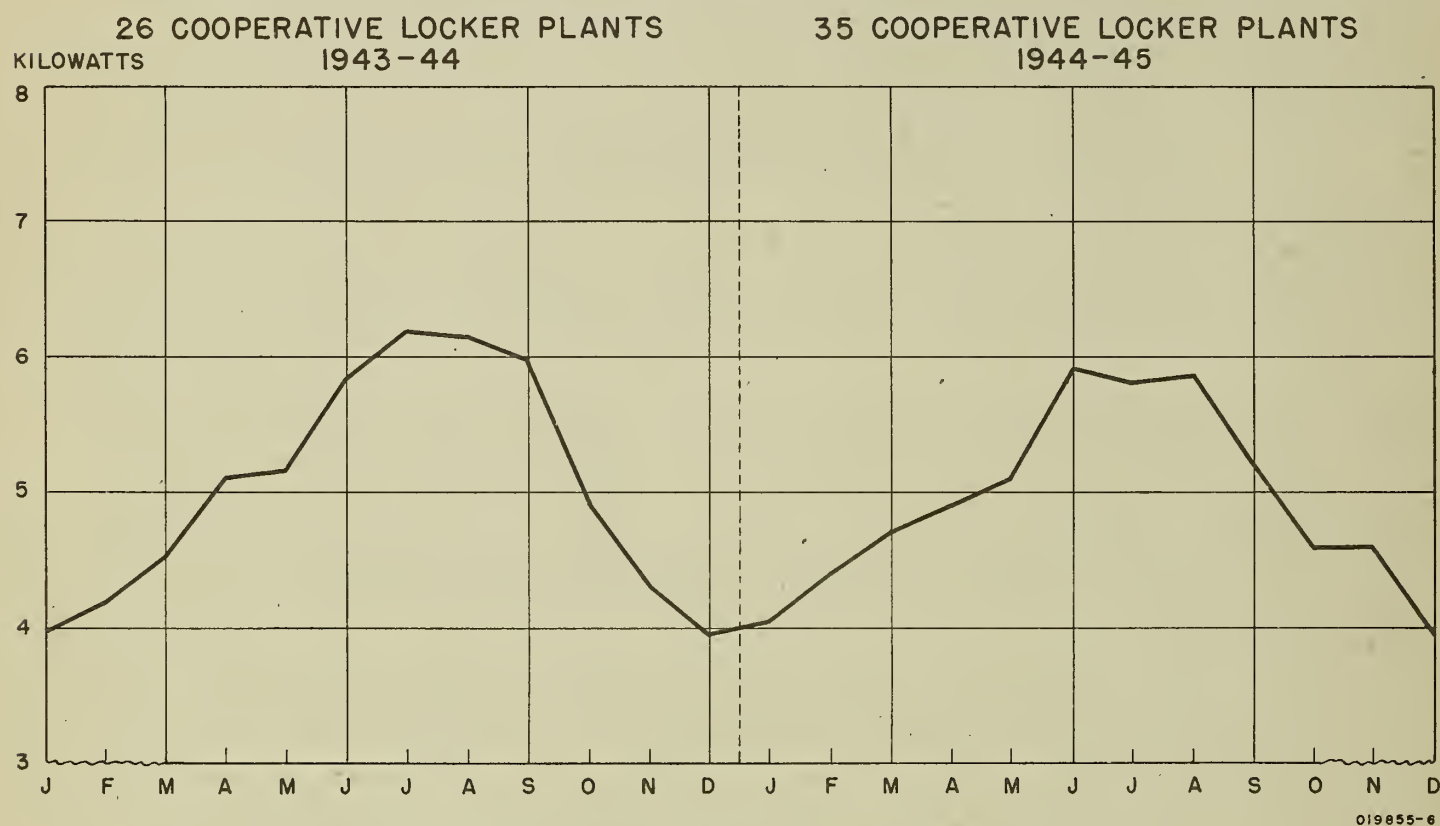


Figure 6. - Average kilowatt hours consumed per locker, based on total capacity, Illinois cooperative locker plants, 1943-44 and 1944-45.

Table 15. - Electricity consumed per year, per locker installed, by 27 plants, and some measurable factors affecting consumption

Plants ^a	Lockers ^b installed	Cubic space per locker				Cure	Poundage per locker ^c	Water consumption per locker	Electricity consumed per locker
		Locker room	Sharp freeze	Chill and age	Cu. ft.				
Number									
17 - A.....	386	14.1	1.6	7.3	-	359	1,647	31.59	
1 - C.....	490	13.4	1.4	4.3	-	332	(d)	43.13	
25 - B.....	613	13.2	.9	2.8	1.4	401	2,309	43.59	
25 - A.....	610	13.9	.9	3.1	3.1	414	1,895	46.65	
4 - B.....	525	14.8	1.9	7.4	1.1	348	1,794	50.18	
2 - C.....	320	13.4	1.6	4.4	-	478	1,742	50.45	
1 - B.....	340	13.4	1.5	3.4	-	417	(d)	51.12	
25 - C.....	600	12.2	.8	5.4	.8	366	(d)	51.27	
2 - A.....	740	14.8	1.7	5.8	-	475	2,159	53.17	
1 - A.....	490	13.4	1.4	4.3	-	334	2,147	54.07	
18 - B.....	315	15.5	1.7	4.7	-	476	(d)	56.41	
19 - A.....	540	14.1	1.1	3.9	1.6	734	156	57.48	
18 - A.....	556	13.6	1.3	4.6	-	402	1,626	58.81	
20 - A.....	375	14.4	1.6	4.9	3.3	298	419	61.13	
2 - D.....	360	12.5	1.7	6.0	2.1	414	2,432	62.62	
24 - A.....	428	14.9	2.1	8.2	-	338	1,928	62.92	
2 - E.....	348	13.4	1.6	4.6	-	470	(d)	70.59	
8 - A.....	965	15.0	1.9	3.7	-	288	53	70.96	
22 - A.....	290	14.8	.4	4.0	-	337	(d)	71.49	
12 - A.....	748	13.7	.6	2.9	1.8	322	(d)	72.52	
4 - A.....	320	14.0	2.3	5.1	-	372	1,506	72.96	
6 - A.....	410	15.9	1.8	6.4	2.0	394	6,312	73.01	
7 - A.....	608	14.1	1.1	5.5	-	490	761	74.78	
9 - A.....	562	11.5	1.1	7.1	2.2	486	2,533	75.25	
5 - A.....	370	13.2	1.5	4.0	-	609	86	80.90	
15 - A.....	445	14.1	1.2	5.6	.8	606	(d)	80.90	
1 - D.....	295	14.0	1.7	5.1	4.6	426	(d)	82.37	
Average.....	483	13.9	1.4	4.9	1.9	417	1,660	^e 61.17	

^aSee footnote a, table 3.

^bAll locker rooms filled to capacity with lockers.

^cPoundage includes that processed for storage in branch lockers.

^dData not available.

^eOnly 27 plants included in this analysis thus the difference in average power consumption as compared with table 14.

Source of data: Field survey.

Table 16. - Average rental rates and processing charges for 25 Illinois cooperative locker associations

Association	Average locker rental rate	Chill, cut, wrap, freeze and grind charge	Curing and smoking charge	Lard rendering charge	Fruit and vegetable freezing charge	
					Per pint	Per quart
	Dollars	Cents				
1.....	10.20	0.01½	0.04	0.03	^c 0.01	-
2.....	11.49	0.02	0.04	0.02	0.01	0.02
3.....	13.00	0.02	0.03	0.02	^c 0.02	-
4.....	10.55	0.01½	0.04	-	0.01	0.02
5.....	11.57	0.02	(a)	-	0.02	0.02
6.....	12.40	0.01½	0.04	0.03	0.01	0.02
7.....	11.98	0.01½	(b)	0.01½	^c 0.01½	-
8.....	12.60	0.02	(b)	-	0.02	0.03
9.....	10.63	0.02	0.03	0.03	0.02	0.03
10.....	12.33	0.02	-	-	0.02	0.02
11.....	11.71	0.02	0.04	0.03	0.02	0.03
12.....	12.69	0.01½	0.04	0.02	0.02	0.04
13.....	12.60	0.02	(b)	0.03	0.02	0.03
14.....	12.54	0.02½	-	-	^c 0.02½	-
15.....	12.20	0.02	0.03	(b)	0.01	0.02
16.....	10.33	0.01¾	(b)	-	0.02	0.03
17.....	10.14	0.01½	-	-	0.01	0.02
18.....	12.00	0.01½	(b)	(b)	0.01	0.02
19.....	12.33	0.01½	0.03	0.03	0.02	0.03
20.....	12.42	0.02	0.05	0.03	0.01	0.01
21.....	10.20	0.01¼	-	-	-	0.02½
22.....	12.60	0.02	-	-	0.02	0.03
23.....	10.00	0.02	0.03	0.03	0.02	0.03
24.....	12.67	0.02	-	0.02	0.01	0.02
25.....	10.60	0.02	0.02½	-	0.02	0.03

^aUnit or piece basis.^bCommission.^cPer pound.

Source of data: Field survey.

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